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Thematic Edition

Ecosystem, Innovation and Excellence in Enhancing Organization

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About the Journal

Overview

Pertanika Journal of Social Sciences & Humanities (JSSH) is the official journal of Universiti Putra Malaysia published by UPM Press. It is an open-access online scientific journal which is free of charge. It publishes the scientific outputs. It neither accepts nor commissions third party content.

Recognized internationally as the leading peer-reviewed interdisciplinary journal devoted to the publication of original papers, it serves as a forum for practical approaches to improving quality in issues pertaining to social and behavioural sciences as well as the humanities.

JSSH is a **quarterly** (*March, June, September* and *December*) periodical that considers for publication original articles as per its scope. The journal publishes in **English** and it is open to authors around the world regardless of the nationality.

The Journal is available world-wide.

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Pertanika Journal of Social Sciences & Humanities aims to develop as a pioneer journal for the social sciences with a focus on emerging issues pertaining to the social and behavioural sciences as well as the humanities.

Areas relevant to the scope of the journal include Social Sciences—Accounting, anthropology, Archaeology and history, Architecture and habitat, Consumer and family economics, Economics, Education, Finance, Geography, Law, Management studies, Media and communication studies, Political sciences and public policy, Population studies, Psychology, Sociology, Technology management, Tourism; Humanities—Arts and culture, Dance, Historical and civilisation studies, Language and Linguistics, Literature, Music, Philosophy, Religious studies, Sports.

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Pertanika was founded in 1978. A decision was made in 1992 to streamline Pertanika into three journals as Journal of Tropical Agricultural Science, Journal of Science & Technology, and **Journal of Social Sciences & Humanities** to meet the need for specialised journals in areas of study aligned with the interdisciplinary strengths of the university.

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Pertanika is almost **40 years old**; this accumulated knowledge has resulted in Pertanika JSSH being abstracted and indexed in **SCOPUS** (Elsevier), Thomson (ISI) **Web of Science™ Core Collection** Emerging Sources Citation Index (ESCI). Web of Knowledge [BIOSIS & CAB Abstracts], **EBSCO** and EBSCOhost, **DOAJ**, **Google Scholar**, **TIB**, **MyCite**, **ISC**, **Cabell's Directories** & Journal Guide.

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International Standard Serial Number (ISSN)

An ISSN is an 8-digit code used to identify periodicals such as journals of all kinds and on all media–print and electronic. All Pertanika journals have ISSN as well as an e-ISSN.

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The *Introduction* explains the scope and objective of the study in the light of current knowledge on the subject; the *Materials and Methods* describes how the study was conducted; the *Results* section reports what was found in the study; and the *Discussion* section explains meaning and significance of the results and provides suggestions for future directions of research. The manuscript must be prepared according to the Journal's **INSTRUCTIONS TO AUTHORS**.

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Authors are notified with an acknowledgement containing a *Manuscript ID* on receipt of a manuscript, and upon the editorial decision regarding publication.

Pertanika follows a **double-blind peer-review** process. Manuscripts deemed suitable for publication are usually sent to reviewers. Authors are encouraged to suggest names of at least three potential reviewers at the time of submission of their manuscript to Pertanika, but the editors will make the final choice. The editors are not, however, bound by these suggestions.

Notification of the editorial decision is usually provided within ten to fourteen weeks from the receipt of manuscript. Publication of solicited manuscripts is not guaranteed. In most cases, manuscripts are accepted conditionally, pending an author's revision of the material.

As articles are double-blind reviewed, material that might identify authorship of the paper should be placed only on page 2 as described in the first-4 page format in Pertanika's **Instructions to Authors** given at the back of this journal.

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In the peer-review process, three referees independently evaluate the scientific quality of the submitted manuscripts.

Peer reviewers are experts chosen by journal editors to provide written assessment of the **strengths** and **weaknesses** of written research, with the aim of improving the reporting of research and identifying the most appropriate and highest quality material for the journal.

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What happens to a manuscript once it is submitted to *Pertanika*? Typically, there are seven steps to the editorial review process:

1. The Journal's chief executive editor and the editorial board examine the paper to determine whether it is appropriate for the journal and should be reviewed. If not appropriate, the manuscript is rejected outright and the author is informed.

2. The chief executive editor sends the article-identifying information having been removed, to three reviewers. Typically, one of these is from the Journal's editorial board. Others are specialists in the subject matter represented by the article. The chief executive editor asks them to complete the review in three weeks.

   Comments to authors are about the appropriateness and adequacy of the theoretical or conceptual framework, literature review, method, results and discussion, and conclusions. Reviewers often include suggestions for strengthening of the manuscript. Comments to the editor are in the nature of the significance of the work and its potential contribution to the literature.

3. The chief executive editor, in consultation with the editor-in-chief, examines the reviews and decides whether to reject the manuscript, invite the author(s) to revise and resubmit the manuscript, or seek additional reviews. Final acceptance or rejection rests with the Edito-in-Chief, who reserves the right to refuse any material for publication. In rare instances, the manuscript is accepted with almost no revision. Almost without exception, reviewers' comments (to the author) are forwarded to the author. If a revision is indicated, the editor provides guidelines for attending to the reviewers' suggestions and perhaps additional advice about revising the manuscript.

4. The authors decide whether and how to address the reviewers' comments and criticisms and the editor's concerns. The authors return a revised version of the paper to the chief executive

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editor along with specific information describing how they have answered' the concerns of the reviewers and the editor, usually in a tabular form. The author(s) may also submit a rebuttal if there is a need especially when the author disagrees with certain comments provided by reviewer(s).

5. The chief executive editor sends the revised paper out for re-review. Typically, at least one of the original reviewers will be asked to examine the article.

6. When the reviewers have completed their work, the chief executive editor in consultation with the editorial board and the editor-in-chief examine their comments and decide whether the paper is ready to be published, needs another round of revisions, or should be rejected.

7. If the decision is to accept, an acceptance letter is sent to all the author(s), the paper is sent to the Press. The article should appear in print in approximately three months.

   The Publisher ensures that the paper adheres to the correct style (in-text citations, the reference list, and tables are typical areas of concern, clarity, and grammar). The authors are asked to respond to any minor queries by the Publisher. Following these corrections, page proofs are mailed to the corresponding authors for their final approval. At this point, **only essential changes are accepted**. Finally, the article appears in the pages of the Journal and is posted on-line.

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AN INTERNATIONAL PEER-REVIEWED JOURNAL

ABSTRACTING AND INDEXING OF PERTANIKA JOURNALS

Pertanika is almost **40 years old;** this accumulated knowledge has resulted in the journals being abstracted and indexed in **SCOPUS** (Elsevier), Clarivate Analytics *[formely known as Thomson (ISI)]* **Web of Science™ Core Collection** - Emerging Sources Citation Index (ESCI). Web of Knowledge [BIOSIS & CAB Abstracts], **EBSCO** and EBSCOhost, **DOAJ**, **ERA**, **Google Scholar, TIB, MyCite,** Islamic World Science Citation Center (ISC), ASEAN Citation Index (ACI), **Cabell's Directories** & Journal Guide.

Preface

We are pleased to present this special issue of Pertanika Journal of Social Sciences and Humanities (JSSH). It is a compilation of 26 research articles from different countries, namely **Indonesia, Malaysia, Canada, Saudi Arabia and Thailand.** The topics include but not limited to: Leadership, Strategic Planning, Customer and Market Focus, Information, Measurement, Knowledge Management, and Information Technology, Human Resource, Operational Focus, and Communication for Performance Excellence.

The first article discusses the effect of organisational culture, transformational leadership, and job characteristics towards employee Engagement at PT XYZ (*Rianto Nurcahyo, Patricia Della, Damar Aji Irawan and Johanes Ronaldy*). The second article examines knowledge-sharing network development for historical archive on human evolution and development (HEAD) of the LEAD programme at Leiden University, Netherlands (*Andri Yanto and Elnovani Lusiana*The following articles meanwhile focus on: online groceries segmentation of brand preference, shopping convenience, and adoption level to influence consumer purchase intention (*Annetta Gunawan, Rachmawati Anggun Saleha and Brian Garda Muchardie*); the effect of service quality and customer satisfaction on customer loyalty on online-based transportation (Grabcar users) in Jakarta (*Aryo Bismo, Haryadi Sarjono and Andika Ferian*); determinant of performance and intention to leave of employees in border region at Mahakam Ulu regency (*Hernawaty, Ernie Tisnawati Sule, Imas Soemaryani and Yunizar*). Additionally, other topics discussed were influence of corporate image, user image, and product image on purchase decision of nitrogen at Pertamina gas stations (*Freddy Pandapotan Simbolon and Rita Yohanes*); a six sigma application for the reduction of floor covering defects (*Sambudi Hamali, Shelvy Kurniawan, Cecep Hidayat, An Nisaa Amalia Fitriani, Garvin Osmond and Natasha Evanti*); the role of monetary promotion as a moderator between intensity of distribution channel and brand equity of hand sanitiser (*Retno Dewanti, Ratu Desita Piyantina and Andreas Chang*). Authors also examined knowledge sharing activities among lecturers in Binus University in conducting research and its impact on the performance of lecturer (*Hartiwi Prabowo, Enny Noegraheni, Teguh Sriwidadi and Yuniarty*); promoting health and brand awareness - an overview of integrated gamification approach on corporate sector (*Titik Respati, Eko Nugroho and Gilarsi W Setijono*); the power of analytical hierarchy process for performance appraisal in promotion selection (*Enggal Sriwardiningsih, Caria Ningsih, Rudy Aryanto and Budiman Notonegoro*); ERP implementation critical success factors for SME - a study of SAP one implementation in Jakarta (*Angtyasti Jiwasiddi and Benyamin Mondong*); apprenticeship model in entrepreneurship learning at university (*Hari Mulyadi, M. Arief Ramdhany and Ratih Hurriyati*).

The topic of adoption of e-banking services by banking customers in South Tangerang using technology acceptance model (TAM) approach was discussed by (*Regina Eka Riantini and Riantini and Son Wandrial*) while effects of social media perceptions on in-group and out-of-group e-WoM interactions in Jakarta's adolescents were the focus of (*Desyra Sukma Dewanthi, Adilla Anggraeni and Frederick Setjadiningrat*); brand action for environment sustainability - is brand a a hero or a caregiver? (*Dwinita Laksmidewi and Yasintha Soelasih*); optimisation of BTS capacity and location using particle swarm optimization - a case study in South West Java Indonesia (*Palti Marulitua Sitorus, An isah Firli, Sri Widiyanesti and Svadev Prasant Mahasagara*); the influence of business process on accounting information system quality (*Meiryani and Lusianah*); measuring knowledge management system implementation readiness (*Luciana Andrawina, Rayinda Pramuditya Soesanto, Samhuri Ikbal Pradana and Gilang Ramadhan*). Other interesting themes included creating strong brand through storytelling on an application-based transportation industry (*Maria Anggia Widyakusumastuti and Daniel Bermo Satria Wiguna*); a strategic perspective on how environment-serving-organisation concept affects firm performance (*Augustinus Nicolaas Hillebrandes Oroh*); service companies - awareness of corporate reputation (*Mia Angeline, Yuanita Safitri and Daru Wibowo*); search engine optimization in news production online marketing practice in Indonesia online news media (*Indra Prawira and Mariko Rizkiansyah*); tourism area life cycle in Dieng tourism village as one of national strategic tourism areas in Indonesia (*Budi Setiawan and Kadek Wiweka*). The rest of the articles looked at factors which affect corporate taxpayer's interest using e-filing system (*Levana Dhia Prawati and Maya Safira Dewi*); and the impact of job satisfaction in increasing employees' organisational commitment in sharia bank (*Syamsul Hadi Senen, Masharyono and Ade Pipit Udiani*).

All the above papers had underwent Pertanika's peer-review process by internal as well as external referees. This was to ensure quality of the papers justified the high ranking of the journal, which is renowned as a well-cited journal worldwide.

We take this opportunity to thank our contributors as well as our regular reviewers endeavour in ensuring the success of this publication. It is hoped PERTANIKA journals encourage scholars from around the world to be more active in publishing their research papers.

Our deepest gratitude goes to Chief Executive Editor, Dr. Nayan KANWAL, Universiti Putra Malaysia for his hard work, leadership, courage and consistent dedication and effort to improving the quality of PERTANIKA publications.

Guest Editors:

Bachtiar H. Simamora *(Dr.)*
Idris Gautama So *(Dr.)*
Engkos Achmad Kuncoro *(Dr.)*

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How Organisational Culture, Transformational Leadership, and Job Characteristics Affect Employee Engagement at PT XYZ

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ABSTRACT

Employee engagement is crucial for a success of a company and therefore, in order to improve their engagement, the company should pay attention to factors such as a strong organisational culture, trustworthy transformational leadership, and job characteristics. This study analyses the influence of organisational culture, transformational leadership, and job characteristics on employee engagement. A set of questionnaires was distributed to 84 selected employees at XYZ and data obtained was subjected to regression analysis. Findings showed that organisational culture, transformational leadership, and job characteristics partially or simultaneously had positive influence on employee engagement.

Keywords: Employee engagement, job characteristics, organisational culture, transformational leadership

INTRODUCTION

The establishment of ASEAN Economic Community (AEC) in 2015 has led to increased competition among industries and companies. The insurance sector in Indonesia has been particularly affected by direct competition with international insurance companies to compete for their share of the market.

Based on the 2013 *Insurance Annual Statistics* book issued by the Financial Services Authority (OJK), there was an increase in the number of insurance companies from 139 in 2011 to 140 companies in 2013. Therefore, in facing tougher competitive environment, organisations and companies should be more flexible in facing environmental changes, such as information system, economic fluctuation, and market

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conditions among others. An important internal environment is the company's human resources. Human resource is one of the company's most important factor in competing in the business world. Employees must be well managed (Mondy & Premeaux, 2014) and must reach an optimum level of skills and competence.

High level of commitment among employees ensures they fulfil their responsibilities and increase productivity. This is called "employee engagement". Employee engagement has become key to achieving the company's objectives (Siddhanta & Roy, 2010). However, a survey conducted by Tiny Pulse Industry Ranking Report on 30,000 employees of 500 global finance and insurance companies, found they had a low level of happiness.

Table 1
Best industry happiness ranking

	Best Industry Happiness Rankings
1	Construction and Facilities Services
2	Consumer Product and Services
3	Technology and Software
4	Telecom, Energy and Utilities
5	Healthcare, Pharmaceuticals and Biotech
6	Hospitality
7	Media and Entertainment
8	Finance and Insurance
9	Education
10	Business Services and Consulting
11	Government and Non-Profit
12	Manufacturing

Source: http://www.tinypulse.com/

When an organisation engage its employees effectively, the chance of losing them may be reduced. A leader must find ways to retain employees who are experienced and skilled so that the company has a competitive edge (Siddhanta & Roy, 2010).

PT XYZ, a General Insurance company (Loss), is also trying to expand its networks in Indonesia by establishing new branch offices to meet public demand. PT XYZ has 13 branch offices spread throughout Indonesia. The Head Office (HO) as its administrative centre is located at Karawaci, Tangerang. Employees at the head office have bigger responsibilities and more complex work procedures compared with those at the branch offices.

The present paper examines the impacts of organisational culture, transformational leadership, and job characteristics on employee engagement at PT XYZ.

LITERATURE REVIEW

There are many studies focused on "employee engagement". Kahn, in Siddhanta and Roy (2010) described employee engagement as "dealing with how someone interprets, contributes, and mobilizes their entire physical, cognitive, and emotional strength to accomplish their job or role".

Engagement, as cited in Macey and Schneider (2008), refers to a folk theory. It is used in a manner that implies the opposite of disengagement. Some popular statements about engagement point out that engaged employees not only contribute more but are also more loyal, so that there is less likelihood for them to voluntarily leave the organisation.

Macey and Schneider (2008) focused on aspects of engagement that have a positive valence. Gallup defines employee engagement as those who are actively involved and being enthusiastic in doing their job. It argues that employee engagement is similar with employee's commitment and positive emotion (Markos & Sridevi, 2010).

Perrin's Global Workforce Study in Markos and Sridevi (2010) defined "employee engagement" as "employee's ability and willingness in helping the company to grow". This kind of employees usually gives their best performance.

Employee engagement also refers to the extent in which employees contribute and involve more (Kompaso & Sridevi, 2010). As cited in Dernovsek (2008), Gallop argued that employee engagement is necessarily related to a positive emotional attachment and commitment of the employees.

Meanwhile, Robinson, Perryman and Hayday (2004) defined employee engagement as "a positive attitude held by the employee towards the organization and its values". An engaged employee tends to be aware of business context and also works well with other employees with the aim to improve their performance to gain advantages for the organisation.

The organisation should establish and develop effective work engagement among its employees. Therefore, it necessary to build a two-way relationship between employer and employee. Attridge (2010) said that work engagement can be developed by adopting several workplace practices that address supervisory communication, job design, resource support, working conditions, corporate culture, and leadership style.

Caesar (2016) recognised leadership as an important factor in shaping corporate culture to gain competitive advantage. If the organisation does not have such strong leadership, it becomes vulnerable, and the employees may not be able to embrace its culture. Leadership styles influence the organisation. One of these styles, transformative leadership, is aimed at bringing changes and effective communication affect employee's commitment positively.

A study involving more than 10,000 employees in the United Kingdom showed different levels of their engagement, which depend on the employees' personal and job characteristics (Robinson et al., 2004). Robinson et al. (2004) key findings are: 1) there is a tendency for superiors such as managers as well as executives to possess a higher level of engagement than the others who are in supporting roles; 2) skilled workers who are highly educated are more engaged as well as tended to be more loyal to their professions than to their organisations.

Engagement levels decline when the length of service at the same organisation increases. Employees who have a personal development plan and who receive formal performance appraisals annually, have significantly higher engagement levels than those who do not, and having an accident or an injury at work or experiencing harassments on the job could significantly reduce their engagement.

According to Macey and Schneider (2008), engagement evolves from work attitudes. Studies show that employee engagement has a close link to organisational performance. It is believed that when companies have engaged employees, the turnover is less as many become loyal to the company.

Arifin, Troena, Djumahir and Rahayu (2014) found out that the influence of leadership, personal characteristics of the teachers' work engagement and organisational culture have positive impact on the teacher's performance, which supports the results of previous studies. Besides, work engagement acts as a mediator between leadership, organisational culture and personal characteristics on teacher's performance.

Therefore, it can be concluded that employee engagement is their willingness to contribute their physical, cognitive, and emotional strength to do the job in order to help the company grow and become successful.

Dimensions of Employee Engagement

Utrecht Work Engagement Scale (UWES) has three dimensions of employee engagement as discussed by Attridge (2010): *Vigour, Dedication*, and *Absorption*.

Organisational Culture

The concept of "organisation" is ambiguous. Schein (1990) opined that organisational culture should not be defined as "cultural phenomena". Company culture refers to the fact it has enough stability and common history to allow a culture to form. This means that some organizations will have no overarching culture because they have no common history or have a high turnover rate.

Other organisations have "strong" cultures because of a long shared history or important shared intense experiences (such as in a combat unit). However, the content and strength have to be determined empirically. They cannot be presumed only by observing the surface of cultural phenomena.

"Culture" is what a group learns over a period of time as the group solves its external and internal problems. Such learning process may affect behavioural, cognitive, and an emotional process of the group member. Extrapolating further from a functionalist anthropological view, the deepest level of culture will be cognitive in the form of perceptions, language, and thought processes that a group shares which will determine feelings, attitudes, espoused values, and overt behaviour of the group.

"Organisational culture" may be defined as "a general pattern of beliefs, expectations, and values that are assumed to guide the behavior of organizational members" (Schein, 1990). Organisational culture evolves out of the interaction between employees and the internal environment

(Schneider, 1983; Schneider, Goldstein, & Smith, 1995).

Robbins and Coulter (2012) defined Organizational Culture as a social knowledge that is known by everyone within an organization. The organization culture takes a form of rules, norms, and values to form employee's existing attitudes and behaviors in the organization. The seven characteristics of Organizational Culture that Robbins and Judge (2015) mentioned include: Innovation and Risk-Taking, Detail Focus, Result-Oriented, People-Oriented, Team-Oriented, Aggressiveness, and Stability.

Transformational Leadership

This concept was first introduced by Burns (1978) in his research on political leaders, but this term is now used in organizational psychology as well. Burns (1978) proposed two other concepts as well: transforming and transactional leadership.

Bass (1985) introduce the term "transformational" by extending Burns's (1978) work to describe the psychological mechanisms that affect transforming and transactional leadership (1985). Bass (1985) explained how transformational leadership could be measured and how it affects the subordinates' motivation and performance. Contrary to Burns (1978), Bass (1985) said that leaders could show both transformational and transactional leadership. In 2008, Bass 30 years of research on transformational leadership, and the results showed that transformational and transactional leadership have positive influences on individual, group, and organisational variables.

Ivancevich, Konopaske and Matteson (2012) stated that transformational leader is a leader who inspires their followers to prioritise organisational purposes above others. In addition, this kind of leader has a remarkable and significant influence on their followers.

Transformational leader pays attention to the needs and developments of their followers. They also encourage their followers to see the old problems with a fresh angel, and they have the ability to inspire and motivate their followers to make more efforts to achieve organisational goals. The characteristics of transformational leaders are as follows: influencer, inspirational motivator, able to stimulate subordinate's intellectual and shown careful consideration.

Employees' organisational commitment can be influenced by transformational leaders that encourage them to think critically using novel approaches. This approach may involve followers in decision-making processes, inspire loyalty while recognising and appreciate various needs of the followers in developing their personal potential (Avolio, 1999; Bass & Avolio, 1994; Yammarino, Spangler, & Bass, 1993).

Walumbwa and Lawler (2003) opined that by being courageous in approaching and dealing with problems and challenges, transformational leaders are able to motivate their followers to increase their level of organisational commitment. This finding is corroborated by several previous studies that employees' organisational commitment was higher when their leaders encourage their employees to participate in decision-making (Allen & Meyer, 1990, 1996; Bycio, Hackett, & Allen, 1995; Jermier & Berkes, 1979; Rhodes & Steers, 1981).

Despite the conceptual and empirical connection between transformational leadership and organisational commitment, the processes by which transformational leaders is influential to employees' organizational commitment level are important.

Avolio (1999) stated that transformational leaders also encourage their followers or employees by challenging their thoughts, creativity and imagination using intellectual stimulation. Leaders allow their followers or employees to look back as well as to analyse traditional ways of doing things, while encouraging them to try novel and creative approaches in problem-solving and work performance (Bass & Avolio, 1994, 1997). They also recognise values, beliefs, and mindset of subordinates can be shaped through coaching as well as mentoring, so they have more responsibility and ultimately developing their followers into generation of leaders (Bass, 1985; Yukl, 1998). Through the leaders' support, encouragement and feedback, the followers would be able improve and enhance their work performance (Hughes, Ginnett, & Curphy, 1999).

Job Characteristics Model

Bakker and Demerouti (2007), and Schaufeli and Salanova (2007) pointed out that job characteristics such as performance feedback, learning opportunities, social support from supervisors and colleagues, skills variety and autonomy are positively associated with work engagement. Job characteristics could have either intrinsic or extrinsic motivational role (Bakker & Demerouti, 2007). Job characteristics could act as an intrinsic motivational role by fulfilling the fundamental needs of human beings such as autonomy, relatedness, and competence (Deci & Ryan 1985; Ryan & Frederick, 1997) and could also play an extrinsic motivational role by providing good performance feedback (Bakker & Demerouti, 2007).

Some previous studies have pointed out that the relationship between job characteristics and work engagement is positive. Schaufeli and Bakker (2004) showed positive relationship between three job characteristics (social support, performance feedback, and supervisory coaching) and work engagement (dedication, vigour, and absorption) in four different samples of Dutch employees.

Robbins and Judge (2015) on Job Characteristics Model, stated that there are five main dimensions: Skill Variety, Task Identity, Task Significance, Autonomy, and Feedback. Meanwhile, the job characteristics model examines responses of a person to jobs as a function moderated by individual characteristics. In other words, the interaction of job and individual characteristics determine job responses. The model shows task characteristics-job response relations are moderated by the incumbent's needs.

Hackman and Oldham (1976) showed the fundamental premise behind the job characteristics model. According to Fried and Ferris (1987), job characteristics influence work results such as job satisfaction and job performance. Thus, the reports made by the workers on their job characteristics should represent the characteristics of the work, which is believed to be veridical.

However, an evidence is considered to be able to prove that incumbent-based assessments of job characteristics are imperfect to measure task characteristics since it represents objective job characteristics and unique viewpoints of each individual. For instance, Gerhart (1990, p. 160) opined that incumbent-based measures do not explain fully the level of convergence.

There are some arguments among scholars too. "Psychologically based measures confound personal needs and preferences…with the objective characteristics of the task" (Cummings & Schwab, 1978). Being more specific, in their social information processing approach to job attitudes, Salancik and Pfeffer (1978) argued that job or task characteristics are "not given but constructed" (p. 227). In other words, employees make use of the information from their social context (e.g. social norms as well as social expectations) to build judgments and viewpoints of the "meaningfulness, importance, and variety of the job" (p. 228). Salancik and Pfeffer found employees' attitudes about jobs and tasks could be affected by their supervisors. For instance, if leaders provide enough information about how an organisation's success depends on the importance of the job, it is believed that employees' perceptions about the significance of their role may increase.

Logical Framework

From the theories above, the logical framework is as follows:

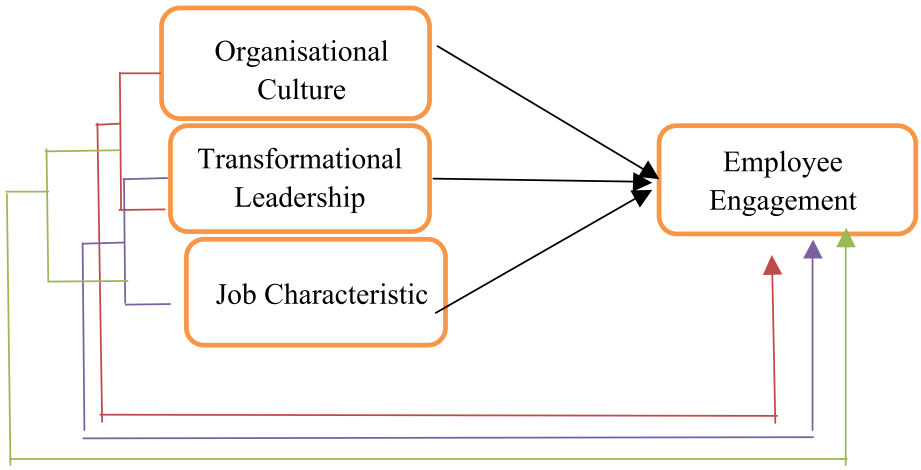

Figure 1. Logical framework
Source: Prepared by the authors

MATERIALS AND METHODS

This research has an associative characteristic which examines the relationship between two variables or more, in the form of causal relationship: independent (affecting) and dependent (affected) variables (Sugiyono, 2014). The authors used questionnaire techniques to collect data.

Larry Cristensen in Sugiyono (2014) stated that respondents should answer numbers of questions or statements given by the authors. The answers are measured using interval (Likert) scale. In this research, a simple random sampling was used, in which samples are taken by giving one different number to each member of the population, then randomly choosing those numbers (Sarwono, 2006). The chosen samples have several characteristics, such as employees working at the Head Office of PT XYZ, both males, and females, from various departments and divisions and have been working for more than three months.

RESULTS AND DISCUSSIONS

The researchers sampled 84 people using the Slovin formula. Majority of the respondents were females (49), thirteen of the respondents have are diploma holders (15.48%), 68 have degrees (80.95%), two possess a Master's degree (2.38%), and one has a doctoral degree (1.19%).

A regression test was conducted to determine whether Organisational Culture (X1), Transformational Leadership (X2), and Job Characteristics (X3) variables have impacts on employee engagement (Y). Multiple Regression tests are conducted using both significant and T test. The authors used distrust value of 95%, and df = n-2, where n is 84 then df = 82. From the analytical results, the authors obtained T value of 1.99, while the F table result is 2.72. The analytical regression results are shown in Table 2.

Table 2
Regression test results

Hypothesis	Impact	Regression Equation	Significance
X1 Y $\longrightarrow$	40.9 %	$Y = 27.291 + 1.062X_1$	Significant
X2 Y $\longrightarrow$	72.2 %	$Y = 29.614 + 1.081X_2$	Significant
X3 Y $\longrightarrow$	58.1 %	$Y = 27.271 + 1.207X_3$	Significant
X1 & X2 Y $\longrightarrow$	62.2 %	$Y = 18.242 + 0.611X1 + 0.803X_2$	Significant
X2 & X3 Y $\longrightarrow$	58.5 %	$Y = 19.055 + 0.861X_2 +0.605X_3$	Significant
X1 & X3 Y $\longrightarrow$	50.6 %	$Y = 15.657 + 0.776X_1 + 0.738X_3$	Significant
X1, X2 & X3 Y $\longrightarrow$	64.9 %	$Y = 12.955 + 0.511X_1 + 0.699X_2 + 0.409X_3$	Significant

Source: Data Processing Results

CONCLUSION

The results of the study can be summarised below.

Organisational culture has partial and significant impact on employee engagement. Thus, when a company is able to improve its organisational culture, it will have positive effect on employee engagement.

Transformational leadership has a partial and significant impact on employee engagement. Thus, when a company improves its transformational leadership, it affects employee engagement positively.

Job characteristics have partial and significant impact on employee engagement. Thus, when a company improves its job characteristics, employee engagement is boosted.

Organisational culture and transformational leadership have simultaneous and significant impact on employee engagement. Thus, when a company is able to improve its organisational culture and transformational leadership, which may have a positive effect on employee engagement.

These findings are corroborated by previous studies on transformational leadership. Purvanova, Bono and Dzieweczynski (2006) pointed out that there is a significant link between citizenship behaviours and perceived job characteristics, after controlling the objective of job characteristics. It is found that perceived job characteristics have a significant link to citizenship performance.

Transformational leadership decreased and became insignificant when perceived job characteristics were added to the model. Therefore, H1, H2, and H3 were supported in these data by referring to guidelines from Baron and Kenny (1986) for mediation test. Nevertheless, Krull and MacKinnon (1999, 2001) recommended a final step in multilevel tests of mediation to find out the significance of the mediated effect.

There are two definitions of the mediated effect: (a) the link value from transformational leadership to perceived job characteristics multiplied by the link value from perceived job characteristics to citizenship performance, or (b) the direct link value from transformational leadership to citizenship performance minus the link value from transformational leadership to citizenship performance when there is a control on perceived job characteristics.

1. Transformational leadership and job characteristics have simultaneous and significant impact on employee engagement. Thus, when a company improves its transformational leadership and job characteristics, the employee engagement of PT XYZ may also improve as transformational leadership, and job characteristics affect employee engagement positively.
2. Organisational culture and job characteristics have simultaneous and significant impact on employee engagement. Thus, when a company is able to improve its organisational

culture and job characteristics, the employee engagement of PT XYZ may also improve as organisational culture, and job characteristics affect employee engagement positively.

3. Organizational culture, transformational leadership, and job characteristics have simultaneous and significant impact on employee engagement. Thus, when a company improves its organisational culture, transformational leadership, and job characteristics, the employee engagement of PT XYZ may also improve as organizational culture, transformational leadership, and job characteristics have positive effects on employee engagement.

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Knowledge-Sharing Network Development for Historical Archive on Human Evolution and Development (HEAD) of the LEAD Programme at Leiden University, the Netherlands

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ABSTRACT

The purpose of this paper is to extend and share knowledge and information crucial to developing knowledge societies. Increasing the universal access to information in various domains is the key to enhance sustainable socio-economic development, building peace, and channelling intercultural communication. A pilot study was conducted using a case study approach and integrating two perspectives of knowledge value: the success of scholarly communication and knowledge sharing value for the scientific heritage archive. This study captures the research in the field of library and archival sciences, and embarks on the consideration that Leiden University in The Netherlands and Universitas Padjadjaran in Bandung, Indonesia as long-time counterpart and significant memory institutions share interests in the preservation, access and promotion of the important, yet not fully disclosed scientific heritage archive at LEAD for safeguarding this cultural legacy for present and future generations in both countries. This is a follow-up study of First Phase, and the current phase involved the ordering of over 40.000 documents and the digitisation of more than 40.000 catalogue cards. The research encompasses the conceptual model for knowledge network development with a view to contributing to its overall preservation and universal access.

Keywords: Knowledge-sharing, LEAD Programme, Scholarly communication, Scientific Heritage Archive

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INTRODUCTION

The *LEAD/HEAD Protocol* entitled '*LEAD Initiative to Unlock the Historical Archive on Human Evolution and Development (HEAD) at LEAD of Leiden University for*

Universal Access to the Scientific Heritage Archive in The Netherlands', Advanced Distributed Learning (2004) shows that the cultural heritage archive collection contains unique, yet not fully disclosed paper materials, carefully acquired, managed and organised over the past centuries, documenting specific aspects of the process of human evolutionary thinking of past scholars since the 1870s with a focus on Southeast Asia.

Apart from a short description of the remarkable history of the archive and its rescue from destruction of the entire collection of over 400 antique carton boxes with documents and a small supporting specialist library, its significance has been underscored by Dr. Richard E. Leakey from Kenya, who immediately recognised its unique cultural heritage value, and characterised the collection as: '*the earliest historical document collection on human evolution in the world which needs urgent protection and disclosure*' (Slikkerveer, 2011).

Based on the results of the *LEAD Symposium* organised by the LEAD Programme in Leiden in 2011, Slikkerveer (2011) concludes that in view of the unique value of the historical HEAD archive: '*joint efforts should be further undertaken to achieve soonest a timely research agenda for action on the short notice to secure effective collection management for preservation and universal access of the HEAD scientific heritage archive*.'

As a follow-up of the presentations and discussions during the *LEAD Symposium* on the results of the explorative First Phase of the joint HEAD Project, three major research-based tasks have urgently been recommended for the *Historical Archive on Human Evolution and Development* (HEAD): a) *documentation and digitisation process development*; b) *bibliometric and metadata system analysis*, and c) *profiling for scholarly communication and knowledge network developmen*t, all in a collaborative research effort to contribute to the preservation and universal access of the important scientific heritage archive at LEAD (Slikkerveer, 2011).

In light of the above mentioned three research-based tasks, this research proposal seeks to provide a follow-up of the LEAD Symposium (2011) and *profiling for scholarly communication and knowledge network development* through the design of a new profile model for the historical archive on *Human Evolution and Development* (HEAD) at LEAD of Leiden University, and as such contribute to the preservation and access to this important scientific heritage archive in The Netherlands.

The envisaged profile will facilitate the framing of the digital archiving activities in collecting the documents, archives, library contents (books and non-book materials) under the auspices of the joint project on *Human Evolution and Development* (HEAD). The construction of the new model for the profile will be based on the evaluation and selection of models with the objective to develop a core generic profile for scholarly communication and exchange of digital information. The concept of knowledge sharing has been widely used in the field of organisational development, and organisational learning seeks to overcome the practical problem of getting knowledge from one part of an organisation to another (or all other) part (Liu, Chang, & Hu, 2010). According to Mansor and Saparudin (2015), knowledge sharing can occur at organisational level among other things: knowledge sharing captures, organises, reuses and transfers experienced-based knowledge that resides within the organisation or between other organisations and has the potential to be used by others.

To this end, important guiding principles for the profile will be identified to include central registration, definition of basic rules for elements, and identification of common structures (ADL, 2004). The research will also link with the vision of the interdisciplinary LEAD Programme, not only as the 'School of Thought' on *Indigenous knowledge Systems and Development* (IKS&D) engaged in Research & Training in bottom-up strategies for sustainable development, but also as the custodian of the archive on *Human Evolution and Development* (HEAD) focused on the archive as an important example of the world's documentary heritage, representing the oldest collection of documents from the formative period of the history of human evolution in Western Europe, brought together with extraordinary endeavour and risk over more than a century by deliberate intellectual intent of many dedicated academicians.

The relevance to UNESCO (2002) under the auspices of the *International Federation of Library Associations* (IFLA) will be elaborated within the context of the preservation of the world's documentary heritage - particularly those collections under threat of oblivion or destruction -. Finally, in addition to the theoretical and methodological implications of the research, the study will suggest practical recommendations for implementation in similar archives in terms of how to create adequate profiles for knowledge sharing networks of historical archives on specific subjects.

LITERATURE REVIEW

Traditionally, archival science focused on the study of methods and techniques for preserving collections while it also has been engaged in retrieving, cataloguing and handling archives. However, with the recent advent of the digital era, electronic databases have been developed, prompting library and archival science to re-evaluate its position and conduct re-appraisals and revisions in order to increase its universal accessibility (Walch, 1994).

In recent decades, the concept of appraisal has become a central topic in the literature on archival science, where the primary objective of appraisal is to identify documents which are preserved for an unlimited period of time with a view to increase universal access through knowledge network development. As Chalak, Ziaei and Nafei (2014) note, the goal-oriented sharing of knowledge within organisations has led to expedited individual and organisational learning process, improved creativity, and eventually, improved performance at both the individual and organisational level.

Craig (2004), in her recent book *Archival Appraisal: Theory and Practice*, discusses the importance of collection appraisal within the context of archival work as a whole, beginning with an examination of the importance of appraisal for information specialists, records managers, corporate offices' information and knowledge managers, and archivists against the background of the recent era of the digital 'information explosion'. Information explosion and knowledge growth calls for innovative approaches to manage the right knowledge (Saikia, 2012). A useful definition of appraisal in an archival context, relevant for the development of a new profile of the HEAD archive in Leiden, was proposed by Pearce-Moser (2005): '*Appraisal is the process of determining whether records and other materials have permanent (archival) value. Appraisal may be done at the collection, creator, series, file, or item level. Appraisal can take place prior to donation and prior to physical transfer, at or after accessioning. The basis of appraisal decisions may include a number of factors, including the records' provenance and content, their authenticity and reliability, their order and completeness, their condition and costs to preserve them, and their intrinsic value. Appraisal often takes place within a larger institutional collecting policy and mission statement*'.

As regards the development of related knowledge networks for the HEAD archive, necessary for its international promotion and access, practical guidelines will be formulated for the LEAD Programme as the custodian of documents with emerging knowledge-based networks in the form of the internet and other global digital networks (Dempsey, 2000). According to Pugh and Prusak (2013), 'knowledge networks' are: '*collections of individuals and teams who come together across organizational, spatial and disciplinary boundaries to invent and share a body of knowledge. The focus of such networks is usually on developing, distributing and applying knowledge. For-profit and nonprofit organizations of all sizes are seizing on this model to learn more quickly and collaborate productively*.' While in the past, formal networks only existed between academicians, artists and tradesmen, today web-based collaboration has facilitated the identification and distribution of codified knowledge enormously.

In the present research, the focus of the development of knowledge networks for the HEAD archive will not only be on sharing information and creating new knowledge, but also on strengthening research, education and communication capacity among the users of the archive, such as scientists, students and the general public who are interested in the particular subject of human evolution and development. In the current literature on the appraisal of archives within the broader context of methods and techniques developed for the further preservation and promotion of archives, certain blind spots emerged in the discussion on the development of new models of profiles for the historical archive with a view to enhance international promotion and development towards knowledge networks, relevant for disclosure and universal access of scientific and cultural heritage archives, as is the case at LEAD in Leiden University.

In this context, the present research will take up the research challenge and make an effort in close collaboration with other team members of HEAD Project to contribute to the library and archival science by further exploring the methods and techniques of the development of a new model of a profile for the scientific heritage archive. This will be based on the preparatory research of Phase One on the historical archive at LEAD with a view to promote and develop an effective knowledge-based network for the benefit of both providers and users of the unique scientific and cultural heritage in The Netherlands.

MATERIALS AND METHODS

A pilot study was conducted between 2015 and 2016. The determinant of a case study is the willingness of researchers to specifically disclose problems that are associated with a single entity, with the specific context of the existence of the entity (Pendit, 2003). Entities in this research are the historical archive on Human Evolution and Development (HEAD) at LEAD in Leiden University. The case study approach is a suitable strategy when researchers have little chance to control the events that will be investigated and the research focus lies on contemporary phenomena (present) in real life (Yin, 2014). Appropriate methods for the present research include the application of documentation strategies, capable of providing necessary analytical approach to solving problems posed by modern documentation systems.

RESULTS AND DISCUSSIONS

Based on the results of observation and study of documents at the LEAD Programme Leiden University, the team from Universitas Padjadjaran suggested a standard metadata Dublin Core records for the entire archive that is in the LEAD Programme. The present authors are also conducting a study of applications that have been used by the Leiden University Repository (https://openaccess.leidenuniv.nl). In addition, the development of applications which will be used to store an entire digital content along with metadata will be kept at the Leiden University. Furthermore, DSpace software is used and has proven to be quite reliable by universities.

Another consideration is the application repository of the Leiden University has the capability to support loading of all file formats because the majority of the files include the digital file types (pdf and jpg file format). In addition to the various promotional content maintained for scientific benefit, DSpace has effectively indexed all the content by search engines of Google. One other consideration is the cost efficiency for the development of the application can be trimmed. The applications will expedite process inputs and exchange of data between universities.

One of the basic criteria for using standard metadata and existing applications is the ease of exchanging information between Leiden University and Universitas Padjadjaran. Currently, Universitas Padjadjaran has used Eprint for the management of digital content. Technically, in the data exchange process between Leiden University and Universitas Padjadjaran, no technical constraints were found in using the Protocol for Metadata Harvesting (OAI-PMH) when exchanging data with each other.

The development of the knowledge network for the HEAD archive will be based on the processes and functions of the construction of an infrastructure for digital archives, built around standards and technologies of a web content interoperability using Protocol for Metadata Harvesting (OAI-PMH) as a mechanism for repository interoperability.

The adaptation of this scheme will be useful for the realisation of the development of the knowledge-based network for long-term preservation and access to the historical HEAD archive at Leiden University. The main objective of the knowledge sharing network is for scientific communication, especially to make it feasible for true open access to legal scholarly communication between Leiden University and Universitas Padjadjaran. Furthermore, the implication of the knowledge network is that the content grows dynamically and can be accessed from other scholarly universities.

The stages have been completed recently from examination of the content and metadata archives as well as the analysis of the information systems to be used in knowledge-sharing activities. It is also due to the fact Universitas Padjadjaran was recently revitalised and is currently using EPrints repository which can be accessed at http://repository.unpad.ac.id/. Another obstacle is the process of digitising archival collection requiring special handling and special tools for digitising the archive. The human resource is constrained by the lack of people who are able to perform the input of metadata as well as the process of digitisation.

Other activities related to knowledge-sharing network is the existence of social interaction between universities. Although this work has been carried out, some of the stages are conducted again so that these information networks can be realised, while some issues warrant further discussion ranging from human resources problems to the process of digitising the archive.

CONCLUSION

The process of data exchange between Universiteit Leiden and Universitas Padjadjaran faces no technical constraints in using the Protocol for Metadata Harvesting (OAI-PMH) to exchange data with each other. Furthermore, the implication of knowledge-network is that the content grows dynamically and can be accessed from other universities. Another obstacle is the process of digitising archival collection requires special handling and special tools for digitising the archive. Other problems relate to human resources where there is lack of people able to input the metadata, and the process of digitisation. Other activities related to knowledge-sharing network is the existence of social interaction between universities where both conduct research together.

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Online Groceries Segmentation of Brand, Shopping Convenience, and Adoption to Influence Consumer Purchase Intention

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ABSTRACT

The aim of this paper is to understand consumer online purchase intention of groceries. It examines how brand preference, shopping convenience, and adoption level influence purchase intention, and to identify market segmentation of online groceries in Jakarta; the three independent variables are used as segmentation basis. This is an associative-descriptive research based on a survey of 200 respondents in Jakarta. Data is analysed using linear regression and cluster analysis. The results show brand preference, shopping convenience, and consumer adoption level significantly influence purchase intention. Using these independent variables, this research categorised four groups of online shoppers in Jakarta that consist of trail blazer that can be approached by online brand community, socialiser that can be lured by utilising their purchasing data history to create personalised offering, assured achiever that can be reached through educating the market, and community traditionalist that can be approached using a pricing strategy.

Keywords: Adoption level, brand preference market, convenience, online grocery shopping, purchase intention, segmentation

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INTRODUCTION

Technology can help change people's habit and ease of conducting their daily activities. Information can now be mass accessed where users share actual and real-time information (Gunawan, Diana, Muchardie, & Sitinjak, 2016). Digital communications in Indonesia has been on a steady increase. According to Roza (2016), Indonesians spend an average of 8 hours 12 minutes per day on the Internet, which ranks the country at the third place worldwide in terms of usage of the Internet. Therefore, Internet-based business is expected to boom. A research by eMarketer (2014) projected that sales of e-commerce would continue to increase from year to year. Indonesia is the largest contributor of sales number from ASEAN countries. idEA (2013) stated that Indonesia is the 'readiest' e-commerce market among South East Asian countries. E-commerce data transactions, revealed grocery shopping was in the top 5 list of most-frequently purchased product online (idEA, 2013). Nielsen (2015) identified a major opportunity for online groceries market. This is confirmed by a preliminary survey conducted on 102 respondents, whereby 47% of respondents purchased their groceries online, while 77% of the respondents stated their purchase intention in the future.

Ghosh (1990) found purchase intention as an effective tool to predict purchase. It is basically related to consumers' behaviour, perception, and attitude (Jaafar, Lalp, & Naba, 2013). Consumers' behavior is driven by their physiological motivation and in this case, the desire to shop (Kim & Jin, 2001). Purchase intention is more complicated and more significant for consumers nowadays than in the past. Customers are bombarded with information via reports, advertisements, articles, and direct mailings. Additionally, there are different kinds of products, supplies, supermarkets, and shopping malls which make decision-making complex and difficult (Madahi & Sukati, 2012). In the context of e-commerce, online purchase intention can be defined as a situation when a person desires to buy a particular product or service through the website (Chen, Hsu, & Lin, 2010; Fygenson & Pavlou, 2006; Liat & Wuan, 2014). Studies have shown a strong influence of purchase intention towards online shopping behaviour (Fygenson & Pavlou, 2006; He, Lu, & Zhou, 2008; Lim, Osman, Orapin, 2009; Roca, Garcia, & Vega, 2009; Salahuddin, Romle, & Abdullah, 2015). Therefore, consumers' purchase intentions are one of the primary inputs that marketing managers use to forecast future sales and to determine how their future actions will impact purchasing behaviour (Morwitz, 2012).

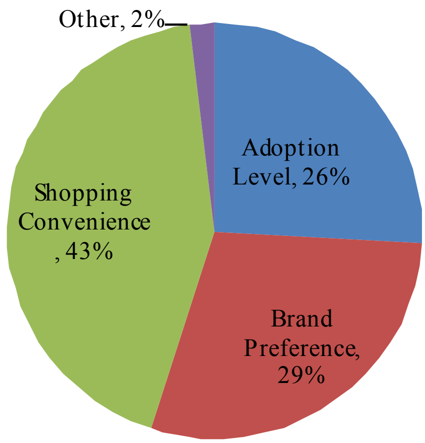

Figure 1. Factors that stimulate purchase intention of online shopping of groceries
Source: Preliminary Research (n = 102)

The purchase intention of customers can be associated with their adoption behavior toward the purchasing technology of grocery products. Preliminary data showed 26% of respondents agreed that technology that supports the system as well as sites/apps are an important factor to influence their online shopping. Interviews with marketing managers of online grocery stores in Jakarta revealed that the biggest challenge in influencing consumer shopping habits lies in educate consumers to switch from traditional grocery shopping at a supermarket to an online shopping system. It is easier to offer consumers who are tech-savvy or familiar with technology to adopt this new system. Nielsen (2015) stated the rank of market adoption varies, but until now the new e-commerce market was only able to tap into the tech-savvy. This finding was supported by Ahmed, Jamal, Ismail and Rezai (2013) who found rate of technology adoption attracts consumers to transact online. Srivastava, Chandra and Theng (2010) examined the level of consumer adoption, which is based on the phenomenon that consumer adoption of mobile payment solutions is low compared with traditional forms of payments. Irani, Dwivedi and Williams (2009) produced similar findings that despite broadband offering several benefits to consumers over its previous narrowband technology, many countries are still experiencing a low level of adoption.

A new product is defined by Kotler and Armstrong (2016) as goods, service, or idea that is perceived by some potential customers as new but which is not for others. Therefore, it is incumbent on marketers to analyse how consumers learn about new products until they eventually decide to adopt. According to Kotler and Armstrong (2016), the adoption process is defined as the mental process of an individual from first learning about an innovation to final adoption. Final adoption is the customer's decision to use the product continuously for the next period. The adoption behaviour of the community shows categories of customers in response to the development of e-commerce. Consumer adoption behaviour in the context of technology products is divided into five categories: innovator, early adopters, early majority, late majority, and laggard (Moore, 2014). Straub (2017) suggested technology adoption is complex, inherently social and a developmental process; an individual construct is unique, yet malleable perceptions of technology that influence their adoption decisions.

In addition to adoption levels, based on the results of preliminary research (Figure 1), brand preference accounts for 29% of a driving force of purchase intention in the online groceries industry. Brand preference in this context is the availability of retail choice that becomes an important factor for consumers. This is supported by JakPat's research (2015) that 46% of consumers do not mind to try the site as well as new applications for there is a large selection of familiar retail brand. Meanwhile, Akdeniz (2012) stated "a strong brand positively influences consumer perceptions, drives store choice and helps to build a broad base of loyal customers". Hence, brand selection will strengthen customer's purchase intention. Kashanizadeh and Esfidani (2014) pointed to brand preference as the level of customer support to the services offered by the company. Mohanraj and Ananth (2016) defined brand preference as subjective, conscious and behavioural tendencies which influence consumer's predisposition towards a brand. Akdeniz (2012) measured perceived value of brand preference in the context of price, quality, emotion, and social. Haider, Jan, Jan and Jan (2013) revealed that product availability is an indicator of brand preference.

The purchase intention is also influenced by shopping convenience. Results of preliminary research (Figure 1) showed shopping convenience accounted for 43% of purchase intention. This was confirmed by Nielsen's report (2015) which pointed to the growing number and popularity of alternative online shopping sites, whereby consumers will use the most appropriate format to meet their needs based on convenience, choice, and value, considering 46% of respondents in the report picked shopping convenience as the main factor in online groceries shopping. Convenience in this context means the ease to get the items needed without having to go to the supermarket, accompanied by an easy payment system. This finding is supported by Jiang, Yang and June (2013) who said "the more convenience that is perceived on searching, transaction and possession/ post-purchase, the greater is the possibility for repurchasing and recommendation by the customer". Meixian (2015) defined shopping convenience as a decrease in non-monetary prices, or specifically, a decrease in time, physical energy and mental energy spent on acquiring goods or services. Developing from their previous research, Jiang, Yang and June (2013) pointed to five indicators of shopping convenience, namely access, search, evaluation, transaction, and possession / post-purchase.

As a new industry, online groceries have a potential to grow in Jakarta. The marketers need to define market segmentation to reach the intended target market, especially in a heterogeneous market of Jakarta. Rempel (2009) stated that due to the different characteristics of each generation, it is important for marketers to treat customers based on their different age groups. It is because customer segments have their unique consumer behaviour and attitudes (Safiek, 2009). Therefore, it is important for marketers to divide the market into specific segments so that each segment can have a different treatment from marketers. In the end, the strategy adopted by retailers can be better targeted, leading to an increase in purchasing decisions (Gunawan, Melati, & Muchardie, 2016). Cristobal, Marimon, Daries and Montagut (2011) examined market segmentation of a virtual supermarket sector in Spain. They classified the behavior of online customer based on his or her attitudes towards the virtual supermarket design. However, in these studies, segmentation was done based on service quality of online supermarket, while the online groceries industry in Jakarta is still at an early stage of introduction. Hence, it would be more appropriate to use the variable purchase intention as the focus of this study.

The purpose of this study is to determine the influence of brand preference, shopping convenience, and adoption level of purchase intention in online grocery shopping and additionally, to determine the market segmentation in online groceries based on brand preference, shopping convenience, and consumer adoption level.

MATERIALS AND METHODS

This is an associative-descriptive research. The associative research aims to determine the effect of brand preference, shopping convenience, and consumer adoption level variables on purchase intention, while descriptive research is used to identify online groceries market segmentation based on the independent variables. This research adopted a survey method using a simple random sampling technique to recruit the respondents.

A regression analysis was used to determine the effect of Brand Preference, Shopping Convenience, and Consumer Adoption Level on Purchase Intention. As the three independent variables affect purchase intention, independent variables are used to identify online groceries market segmentation in Jakarta with cluster analysis method. Variables in this research are shown in Table 1.

Table 1
Operationalisation of research variables

Variable	Dimension
Brand preference *(X1)*	*Perceived value*
	Product availability
	Preference
Shopping convenience *(X2)*	*Access convenience*
	Search convenience
	Evaluation convenience
	Transaction convenience
	Possession / Post-purchase Convenience
Adoption level *(X3)*	*Innovators*
	Early adopters
	Early majority
	Late majority
Purchase intention *(Y)*	*Likely*
	Probable
	Definitely

RESULTS AND DISCUSSIONS

Table 2
Output coefficients

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.616	.530		1.162	.248
X1_Brand preference	.325	.129	.231	2.522	.013
X2_Convenience	.299	.112	.250	2.667	.009
X3_Adoption level	.258	.109	.226	2.356	.021

The Influence of Brand Preference on Purchase Intention

Based on Table 2, brand preference influenced purchase intention. Kashanizadeh and Esfidani (2014) defined brand preference as the level of consumer support for products offered by a company. In this study, brand preference is a variable that determines whether consumer's preferences of a particular retail brand influences the desire to for online grocery shopping. This study found brand preference influences purchase intention. This is in line with Akdeniz (2012) who stated that brand preference has a positive influence on purchase intention.

The Influence of Shopping Convenience on Purchase Intention

Table 2 shows shopping convenience influences purchase intention. Shopping convenience is defined as an ease of shopping (Meixian, 2015). The current research showed shopping convenience has a positive influence on purchase intention, which is in line with Jiang, Yang and Jun (2013).

The Influence of Adoption Level on Purchase Intention

Table 2 shows the adoption level influences purchase intention. Moore's theory (2014) revealed the consumer market can be divided into five sections based on adoption level namely customer's acceptance of a new technological innovation. This research found adoption level influences purchase intention. This is in line with Ahmed et al. (2013) who stated that the rate of technology adoption attracts consumers to transact online.

Influence of Brand Preference, Shopping Convenience, and Adoption Level on Purchase Intention

Table 3
Output Anova

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	9.012	3	3.304	9.853	.000[b]
1	Residual	29.266	96	.305		
	Total	38.278	99			

Table 4
Output model summary

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.585[a]	.735	.211	.55215

From tables 3 and 4, the independent variables of brand preference (X1), shopping convenience (X2), and adoption level (X3) influence account for 73.5% of online purchase intentions groceries in Jakarta while the rest are influenced by other factors.

These three independent variables can be used as the basis for segmentation of online groceries market.

Online Groceries Market Segmentation based on Brand Preference, Shopping Convenience and Adoption Level

Table 5
Output Anova cluster

ANOVA						
	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	df		
Perceived_Value	1.058	3	.273	96	3.881	.011
Product_Availability	1.911	3	.272	96	7.022	.000
Preference	1.525	3	.344	96	4.445	.006
Access_Convenience	4.225	3	.296	96	14.289	.000
Search_Convenience	8.098	3	.232	96	34.888	.000
Evaluation_Convenience	5.933	3	.287	96	20.704	.000
Transaction_Convenience	10.514	3	.350	96	30.061	.000
Possession_Convenience	4.786	3	.316	96	15.158	.000
Innovators	8.654	3	.487	96	17.764	.000
Early_Adopter	7.529	3	.275	96	27.366	.000
Early_Majority	8.160	3	.341	96	23.962	.000
Late_Majority	2.871	3	.367	96	7.831	.000

Based on Table 5, it can be concluded that the entire dimension of the three independent variables can be used as the basis for segmentation. The results revealed a significant difference of attributes average score between the four clusters.

Table 6
Output final cluster centres

Final Cluster Centers				
	Cluster			
	1	2	3	4
Perceived_Value	2.48	3.02	3.03	3.08
Product_Availability	2.92	3.60	3.60	3.75
Preference	2.52	2.95	3.25	3.06
Access_Convenience	2.63	3.46	3.36	2.73
Search_Convenience	2.54	3.72	3.49	2.67
Evaluation_Convenience	2.72	3.26	3.69	2.70
Transaction_Convenience	2.33	3.73	3.64	2.66
Possession_Convenience	3.04	3.61	3.40	2.70
Innovators	3.36	2.17	2.03	2.75
Early_Adopter	2.39	2.39	3.01	3.53
Early_Majority	2.87	4.16	3.02	3.49
Late_Majority	2.73	3.54	3.75	3.48

From Table 6, the distribution of segment characteristics of online grocery shopping in Jakarta can be summarised in Table 7.

Table 7
Online groceries market segmentation in Jakarta

Trail Blazer (Cluster 1)	Socialiser (Cluster 4)	Assured Achiever (Cluster 2)	Community Traditionalist (Cluster 3)
Innovator	Early adopter	Early majority	Late majority
	Perceived value	Access convenience	Preference
	Product availability	Transaction Convenience	Evaluation
		Possession / Post purchase convenience	
		Search convenience	
22 people	52 people	64 people	62 people

Based on Moore's theory (2014), the consumer market is divided into five groups based on their characteristics in accepting an innovation: innovators, early adopters, early majority, late majority, and laggard. However, the laggard is closed to technology acceptance and reject innovation. Therefore, only four groups are examined.

Trail Blazer

The trail blazer shares a common characteristic with the innovator in terms of adoption levels. The main characteristic of this group is those who want to be the first to try innovative or technological products. This group also does not hesitate to offer criticisms or suggestions for the company. With high level of awareness of technology, they just want the truth to ensure all company promises are fulfilled when making a transaction. In dealing with new things, they want to be served by field experts. So, they need someone from the company who is friendly and interactive. In order to fulfil these desires, they are not afraid to take risks. This group represents 11% of the market.

Socialisers

Perceived value and product availability are important for this group. Socialisers share similar characteristics with early adopters in terms of their adoption level. This segment consists of those who receive innovation more quickly than most people because they always use personal intuition and opinion in making decisions. Thus, a person in this segment is an opinion leader. It is important for this group to consider the value of a product. Availability of goods is also a factor that encourages them to make a purchase. Opinions or references from Socialiser about a particular product are sought by the Assured Achiever. Socialiser group accounts for 26% of the market.

Assured Achiever

Assured achiever is concerned with convenience related to access, transaction, possession/post purchase, and search. Moreover, the assured achiever has similar characteristics with the early majority segment in terms of adoption level. The main characteristics of this group are those who are always looking for references from others to ensure the success of the product on others before they try the product. The ease of use is an important factor for assured achiever to try an innovation or a new product. The convenience sought by this group are ease in accessing the products anywhere and anytime, ease in finding the goods, ease of payment method, and ease of refunds. This is the largest group that represents 32% of the market and has potential.

Community Traditionalist

This segment values preference and evaluation. Community traditionalists have similar characteristics with the late majority segment on adoption levels. Both ease and taste related to the brand are very important for these people. This group is represented by people who buy a product that has been purchased and known by others. This usually happens because they are comfortable and satisfied with what they have, so trying something new is not a very important for them. This is why they need the assurance that the product information available is clear and complete, as well as texts or images related to the actual product. Community traditionalist represents 31% of the market share.

CONCLUSION

Several conclusions may be drawn from this research. First, there is a significant influence of brand preference, shopping convenience, and adoption level of purchase intention, either individually or simultaneously. Hence, the three independent variables deserve to be the basis of online groceries market segmentation in Jakarta. Second, the establishment of market segments in the online groceries in Jakarta is divided into four groups, namely trail blazer that has similar characteristics with the innovator in the technology adoption life cycle model; socialiser which has a similar characteristics with early adopters, also perceived value and product availability become a major factor in encouraging purchase intention; assured achiever that has common characteristics with the early majority and the main factors for driving purchase intention, namely convenience in terms of access, transaction, possession/post-purchase, and search; community traditionalist which have similar characteristics with the late majority, and their main factors that drive purchase intention are convenience related to preference and evaluation convenience.

Trail Blazer is a group which has very close relationship with technology, so it is not necessary to put a lot of effort to reach this group. However, the challenge of this group is to make sure they come back to buy again because they tend to try many alternatives and will choose whichever meets their needs. That requires an effort to build an ongoing relationship with this group. Keeping in mind they are very interested in technology, relationships can be built by creating a gathering event or workshop about technology. Also, online communities can be turned into a forum to share their experiences regarding technology and online grocery shopping.

Socialiser is the easiest group to reach but it difficult to satisfy their needs. This is because they are active in looking and trying new things that make them quickly change products. Moreover, this group is not sensitive to price, so the selling price is less suited to the Socialiser. The effort to continue to build relationships with them is by reminding them availability of products they usually buy. This can be done by studying their purchase history to ensure repurchase.

For assured achiever, the ease of use of the application or website is the most important factor and hence, educating them offline is important. This can be done by going directly to the retailers to educate consumers how to purchase groceries online. Marketing events can be done to assure that the product purchased is appropriate.

Community Traditionalist is very sensitive to price. They only use products that are already on the mature position in the product cycle. In attracting this group, a pricing approach is advisable. But it can only be done after the majority of the segments has already adopted online grocery shopping.

This research suggests that further research can be done by using the same variables on other product types or service industry to identify market segmentation, especially in the context of technology adoption. Also, further research can explore more antecedents of purchase intention because of the dynamic environment that causes fast-shifting consumer behaviour.

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The Effect of Service Quality and Customer Satisfaction on Customer Loyalty: A Study of Grabcar Services in Jakarta

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ABSTRACT

In recent years online-based transport modes have become popular in Jakarta. These ride hailing applications (apps) provide many benefits. The purpose of this research is to determine the effect of their quality of service on customer satisfaction and their impact on customer loyalty. Correlations analysis and SPSS are used to analyse data obtained from questionnaires distributed to 100 GrabCar users in Jakarta. A simple random sampling technique was employed to recruit the respondents. The results of this research showed that service quality has a positive and significant impact on customer satisfaction and has a positive but not significant impact on customer loyalty. This study can be used to help online based transportation apps develop a better strategy to improve the quality of their service by boosting customer satisfaction which in turn will increase customer loyalty.

Keywords: Customer satisfaction, customer loyalty, grabcar, ride hailing apps, service quality

INTRODUCTION

In Jakarta, road transportation consists of motorcycles, buses, cars and localised forms of transport, such as *angkots* (public mini-buses) and *bajaj* (public three-wheeled covered motorcycles). The Department of Transport, Jakarta report in 2015 showed the number of cars and motorcycles are increasing steadily at 8.09% and 9.14% respectively. The number of motorcycles and cars in Jakarta was 13.9 million and 3.4 million respectively in 2015. In general, the motor vehicle industry as a whole grows at 8.75% annually.

The increase in the number of motorcycles and cars are due to Jakarta's

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population density and the lack of decent public transportation. Buses, *bajaj*, and taxis lack comfort, and service quality, and therefore people in Jakarta prefer private vehicles. According to Department of Transport, Jakarta, there were 27,079 taxis in Jakarta in 2014 but it decreased in 2015 to 24,368. Meanwhile, the number of four-wheel vehicles in Jakarta is steadily increasing.

Traditional public transport has been affected by the development of ride hailing apps (using smartphone application) technology. People no longer need to wait on the side of the road to hail a taxi; instead they can book a taxi using their smartphone. These enabled ride hailing apps to emerge and quickly became a solution to residents of Jakarta. Heru Sutadi, Executive Director of Indonesia ICT Institute, stated that ride hailing services are appealing because of the ease with which you can book your transport. Additionally, compared with conventional transport system, these ride hailing services would fetch you at your desired location without you having to wait at public location. The growing demand for these ride hailing services have led to their growing popularity. In Jakarta, Uber, Grab, and Go-Jek are the most active offering two-wheel vehicles (motorcycles, known locally as *ojek*) and four-wheel vehicles which consist of multi-purpose vehicles (MPVs), family cars, or sedans.

The Malaysian company, Grab, entered the Indonesian market in August 2015, offering a cash payment method (as opposed to credit card only), and was welcomed in Jakarta. According to Kiki Rizki, Grab's Country Head of Marketing, Grab's three main business pillars are safety, comfort, and speed which is unique to the company. Grab provides insurance for their passengers, a review of their drivers' attitude, assuring cleanliness, and a flat rate to increase service quality. It also provides varied services, from transportation using motorcycles or cars, to services such as delivering documents or food. . This study focused on how service quality affects customer satisfaction and its impact on customer loyalty of GrabCar users.

As expected, Grab is not the only player and one of its competitors is Go-Jek which is a local company established in 2010 that provides almost the same services in Jakarta, Bogor, Depok, Tangerang, Bekasi, Bandung, Surabaya, Bali, and Makassar. Their passenger cars are known as Go-Car. Another direct competitor of Grabcar is Uber, originally from United States, which currently provides ride hailing services in Jakarta, Bandung, and Bali using motorcycles and cars.

LITERATURE REVIEW

Service Quality

Tjiptono (2007) defined service quality as the level of excellence expected and whether it satisfies customer needs. Specifically, service quality is determined by the company's ability to fulfil the needs and wants of the customer based on their expectations. Lewis and Booms (in Tjiptono, 2012) defined service quality as meeting customer expectations. Parasuraman, Zeithamal and Berry in Ivanauskiene and Volungenaite (2014) defined service quality as the difference between customers' expectations and perceptions of the service. Tjiptono and Chandra (2011) stated that it was the customer, not the service provider, which evaluates service quality.

Parasuraman, Zeithamal and Berry (in Tjiptono, 2011) proposed variables to measure service quality:

Reliability, related to the company's ability to deliver the services precisely as promised.

Responsiveness, related to the company's willingness and ability in helping their customer on channelling the money given properly.

Assurance, related to the workers' knowledge and politeness and their ability in building trust and the givers' confidence

Empathy, shows how the company understands the givers' objectives on giving donation, and gives personal affection to the givers.

Tangibles, related to the physical appearance of the service facility, the tools, the workers, and the company's communication material.

Customer Satisfication

Kotler and Amstrong (2010) defined customer satisfaction as the extent to which a product's perceived performance matches a buyer's expectations. Satisfaction is defined as customers' assessment of a certain product or services, on whether the products or services could meet their needs and their expectations (Zeithaml, Bitner, & Gremler, 2009). Kotler, in Tjiptono (2011) defined customer satisfaction as a person's feelings of pleasure or disappointment as a result of comparing the product's perceived performance and whether it meets his or her expectations.

According to Kotler and Keller (2009) one of the keys to maintain a customer is customer satisfaction. According to Irawan (2008) customer satisfaction is a set of perceptions consumers have regarding the performance of products or services and if the latter meets their expectations. Customers are satisfied when the product or service meets or exceeds their expectations. Irawan (2008) reported the following factors influence customer satisfaction in relation to a product or service:

Service Quality: the quality of a service can be measured through opinions of the customers.

Emotional Factor: this factor is important because customer satisfaction can depend on customer's level of connectedness with the product or service. Although highly intangible, this factor determines customer's loyalty.

Ease of acquiring a product or services: if consumers feel it is difficult to communicate with the company to obtain a product or service, this will have a negative impact on the consumer's satisfaction level.

Customer Loyalty

Kotler and Keller (2009) defined loyalty as the customers' commitment to repurchase a certain product or service in the future even if the circumstances and rival marketing efforts may potentially make the customers turn to another company. According to Tjiptono (2011), loyalty is a behavior of customers that will lead to repeated purchases. It can be driven by price or sense of belonging to the particular brand, perhaps through an inferred exclusivity. Customer loyalty means the commitment of customer to the brand, shop, and suppliers, and is based on a very positive attitude from the customers and reflected in their positive buying behaviour (Hidayat, Zalzalah, & Ekasasi, 2016; Tjiptono, 2007). According to Griffin (2010), the factors that can measure customer loyalty are:

a. **Makes regular repeat purchases.**
b. **Purchases across product and service lines.**
c. **Refers to others (referral):** loyal customers will refer the brand to other people with positive WOM (word of mouth).
d. **Demonstrates immunity to competitors (retention):** loyal customers will not change their brand preference.

Service Quality, Customer Satisfaction and Customer Loyalty Relationship

According to Moha and Loindong (2016), service quality and facilities have both a positive and significant relationship with the satisfaction of users. Their findings were supported by Saleh and Kadarisman (2013) who pointed to a positive relation between customer satisfaction and service and product quality. This study will test the effect of these variables in the context of online transport industry. Therefore the first hypothesis is proposed:

H1: Service Quality significantly affects Customer Satisfaction of online transportation users (GrabCar users).

In a study that examined the relationship between service quality and customer satisfaction and loyalty, Cheng and Rashid (2013) found service quality had a positive relationship with customer loyalty. The present study will test the effect of service quality on customer loyalty in the online transport industry which leads to the development of second hypothesis:

H2: Service Quality significantly affects Customer Loyalty of online transport users (GrabCar users).

Prihanto (2013) showed customer satisfaction and customer loyalty have a positive relationship - the higher the level of customer satisfaction, the higher their loyalty.

Based on Hasan (2014), the relationship between customer satisfaction and customer loyalty can be summarised as shown in Table 1.

Table 1
Relationship between customer satisfaction and customer loyalty

		Customer Loyalty	
		Low	High
Customer Satisfaction	Low	*Failures*	*Forced*
		The customers are unsatisfied and disloyal	The customers are unsatisfied but they're loyal to the brand
	High	*Defectors*	*Successes*
		The customers are satisfied, but disloyal	The customers are satisfied and loyal, which makes them ideal to recommend the products or services to others

Table 1 shows how customer satisfaction will affect their loyalty. This study will test if there is a positive relationship between customer satisfaction and customer loyalty on online transport users. The following third hypothesis is proposed:

H3: Customer Satisfaction significantly affects Customer Loyalty of online transport users.

The research model for this study is shown in Figure 1:

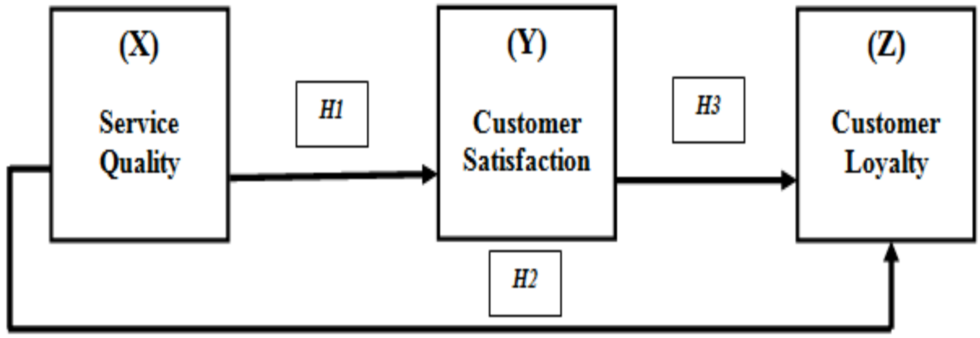

Figure 1. Research model

MATERIALS AND METHODS

This research adopted a questionnaire method and 100 respondents who are GrabCar users were recruited using a simple random sampling technique. A total of 22 indicators related to the dimensions adapted from literature are used: Service Quality (tangibles, reliability, responsiveness, assurance, and empathy), Customer Satisfaction (service quality, emotional factors, ease of acquiring the product/ service) and Customer loyalty (repeat orders, purchase across product lines, referral, and retention). An associative method is used in this study which according to Siregar (2013), shows the relationship between two or more variables. Tests used on this study for analysing the data are as follows: validity test, reliability test, normality test, Pearson Product-Moment Correlation Test and path analysis for testing the hypotheses; all of the tests were conducted using SPSS software.

RESULTS AND DISCUSSIONS

All the tests for this study were conducted using SPSS and used a total of 100 data points from online transport users (Grab Car users) based on a survey questionnaire method.

Validity Test

The validity test used a 95% significance level, and the results for the validity test are shown in Tables 2, 3 and 4.

Table 2
Service quality validity test result

Questions	r_{table}	r_{count}	Questions	r_{table}	r_{count}
X1	0.17	0.608	X6	0.17	0.601
X2	0.17	0.617	X7	0.17	0.574
X3	0.17	0.623	X8	0.17	0.571
X4	0.17	0.281	X9	0.17	0.648
X5	0.17	0.509	X10	0.17	0.698

Table 3
Customer satisfaction validity test result

Questions	r_{table}	r_{count}	Questions	r_{table}	r_{count}
Y1	0.17	0.727	Y4	0.17	0.673
Y2	0.17	0.560	Y5	0.17	0.453
Y3	0.17	0.651	Y6	0.17	0.537

Table 4
Customer loyalty validity test results

Questions	r_{table}	r_{count}	Questions	r_{table}	r_{count}
Z1	0.17	0.626	Z4	0.17	0.625
Z2	0.17	0.575	Z5	0.17	0.698
Z3	0.17	0.594	Z6	0.17	0.580

The results of the validity tests for each variable shows that all of the instruments used for measuring service quality, customer satisfaction, and customer loyalty are valid. The r_{count} of each question on each variable show a higher amount compared to the r_{table} (0.17).

Reliability Test

On conducting the reliability test, the basis for the decision-making is taken from Sarjono and Julianita (2013) in which a survey was considered reliable if the Cronbach's alpha > 0.600. Based on the criteria, these are the results of the reliability tests (Table 5).

Table 5
Reliability test results

Variable	Cronbach's Alpha	N of items
Service Quality	0.852	10
Customer Satisfaction	0.814	6
Customer Loyalty	0.829	6

Based on the Cronbach's Alpha of each variable that shows a higher amount than 0.600, it could be concluded that all of the variables are reliable and can be used for this study.

Normality Test

Data distribution is considered normal if the distribution of the data is still inside the scatter plot. Using the 95% significance level, if the significance number or the probability values is higher than 0.05, the data is normally distributed. It is then transformed into interval data before the normality test (Appendix 1). Using SPSS, the table below shows results of each normality test for the three variables:

Table 6
Service quality normality test result

Variable	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Service Quality	.073	100	.200*	.975	100	.056

*This is a lower bound of the true significance
a. Lilliefors Significance Correction

Table 7
Customer satisfaction normality test result

Variable	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Customer Satisfaction	.069	100	.200	.966	100	.012

*This is a lower bound of the true significance
a. Lilliefors Significance Correction

Table 8
Customer loyalty normality test result

Model	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Customer Loyalty	.086	100	.068	.975	100	.050

*This is a lower bound of the true significance
a. Lilliefors Significance Correction

Each variable shows that each of them had a higher Sig. Kolmogorov-Smirnov compared with the confidence level used. As we could see, the Sig. Kolmogorov-Smirnov for service quality shows 0.073 which is higher than $\alpha = 0.05$. For customer satisfaction and customer loyalty, the Sig. Kolmogorof-Smirnov are 0.069 and 0.086 respectively, both higher than $\alpha = 0.05$. This indicates that all the data for each variable are distributed normally.

Correlation Analysis

Correlation analysis aims to see whether there is a linear relationship between two variables and measures the strength of the relationship. Sarjono and Julianita (2013) interpretations for coefficient correlation used in this study are shown in Table 9.

Table 9
Coefficient correlation of correlation value interpretation

Interval Coefficient	Relation rank
0.80 – 1.000	Very strong
0.60 – 0.799	Strong
0.40 – 0.599	Strong enough
0.20 – 0.399	Weak
0.00 – 0.199	Very weak

The result of the correlation test for this study is shown in Table 10.

Table 10
Correlation test results

		Service Quality (X)	Customer Satisfaction (Y)	Customer Loyalty (Z)
Service Quality (X)	Pearson Correlation	1	.764**	.859**
	Sig. (2-tailed)		.000	.000
	N	100	100	100
Customer Satisfaction (Y)	Pearson Correlation	.764**	1	.720**
	Sig. (2-tailed)	.000		.000
	N	100	100	100
Customer Loyalty (Z)	Pearson Correlation	.859**	.720**	1
	Sig. (2-tailed)	.028	.002	
	N	100	100	100

** Correlation is significant at the 0.01 level (2-tailed)

Based on the data provided above, it can be concluded service quality and customer satisfaction have a strong and positive relationship. This could be seen by their Pearson-Correlation at 0.764. Service quality and customer loyalty show a positive and very strong relationship, with a positive correlation of 0.859. Customer satisfaction also shows a positive and strong relationship with customer satisfaction, which was reflected in the Pearson-Correlation at 0.720.

Path Analysis

The R square (R^2) shown in Table 11 reflects how much service quality affects customer satisfaction. Based on the results, it was concluded that service quality would affect customer satisfaction (58.4%), and the rest not covered in this study.

Table 11
Summary of path sub-structural 1 analysis

	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.764[a]	.584	,580	,50584

a. Predictors: (Constant), Service Quality (X)
b. Dependent Variable: Customer Satisfaction (Y)

Table 12
ANOVA path sub-structural 1

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.172	1	35.172	137.461	.000[b]
	Residual	25.075	98	.256		
	Total	60.248	99			

a. Dependent Variable: Customer Satisfaction (Y)
b. Predictors: (Constant), Service Quality (X)

Using α = 0.05, service quality could be concluded as affecting customer significantly only if the Sig. shows a lower number of α. As we can see in the Table above, the Sig. shows a 0.000 value, which was lower than α = 0.05. This shows that service quality significantly affects customer satisfaction.

Table 13
Coefficients[a] sub-structural 1

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.285	.309		.923	.358
	Service Quality (X)	.886	.076	.764	11.724	.000

a. Dependent Variable: Customer Satisfaction (Y)

The t-test will show whether service quality affects customer satisfaction individually or not. The decision would be made with comparing the value of t_{count} and t_{table}, in which if $_{tcount}$ is higher than t_{table} ($t_{coun}t>t_{table}$), then service quality individually affects customer satisfaction.

Using df = 98 and α = 0.05, the t_{table} used for this study is 1.66; meanwhile the t_{count} as shown in Table 14 is 11.724. Thus, we conclude $t_{count}>t_{table}$; 11.724 > 1.66, which means that service quality individually affects customer satisfaction. Meanwhile, we see the Sig. for this variable is 0.000, compared with α = 0.05. The Sig shows a lower value than α. It could be concluded that service quality makes a significant contribution towards customer satisfaction (**Accept H1**). Based on the information above we could state the formula as shown below:

$$Y = \rho_{yx}X + \rho_y\ \varepsilon_1$$

$$Y = 0.764X + 0.64\ \varepsilon^1$$

Notes - Y: Customer Satisfaction, X: Service Quality

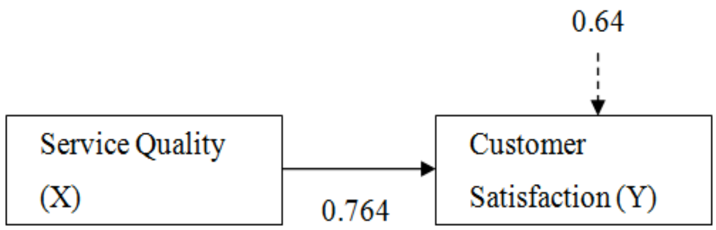

Figure 2. Sub-structural 1

The R square (R^2) shows a number of 0.742 or 74.2%, which reflects the amount of effect service quality and customer satisfaction have on customer loyalty. This also means that other factors outside the two variables in this study, affects customer loyalty 25.3%.

Table 14
Summary of path sub-structural 2 analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.865[a]	.747	.742	.44905

a. Predictors: (Constant), Customer Satisfaction (Y), Service Quality (X)
b. Dependent Variable: Customer Loyalty (Z)

Table 15
ANOVA path sub-structural 2

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.895	2	28.947	143.557	.000[b]
	Residual	19.559	97	0.202		
	Total		77.454	99		

a. Dependent Variable: Customer Loyalty (Z)
b. Predictors: (Constant), Customer Satisfaction (Y), Service Quality (X)

The Sig. in the table above shows a value of 0.000. If we compare it to $\alpha = 0.05$, the Sig shows a lower value than α. This concluded that both service quality and customer satisfaction have a significant effect on customer satisfaction.

Table 16
Coefficients[a] sub-structural 2

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.561	.276		-5.663	,000
	Service Quality(X)	,976	,104	,742	9.379	,000
	Customer Satisfaction (Y)	,174	,090	,153	1,938	,056

a. Dependent Variable: Customer Loyalty (Z)

Using t-test, we would like to test whether both service quality and customer satisfaction affect customer loyalty individually. In making the decision, we compared the value of t_{count} and t_{table}, in which if the t_{count} is higher than the ttable (t_{count}>t_{table}), then service quality and customer satisfaction individually affect customer loyalty.

Using df = 98 and α = 0.05, the ttable used for this study was 1.66, meanwhile the t_{count} for service quality as shown in table 17 is 9.379. We can conclude that t_{count}>t_{table}; 9.379> 1.66, which means that service quality affects customer loyalty individually. Meanwhile, we could also see that the Sig. for this variable is 0.000, compared with α = 0.05; the Sig shows a lower value than α. It could also be concluded that service quality makes a significant contribution to customer loyalty (**Accept H2**).

The t_{count} for customer satisfaction as shown in Table 17 is 1.938. With this, we can conclude that t_{count}>t_{table}; 1.938 > 1.66, which means that individually, customer satisfaction affects customer loyalty. Meanwhile, the Sig. for customer satisfaction is 0.056, compared to α = 0.05; the Sig shows a higher value than α. This proves that customer satisfaction does not contribute significantly to customer loyalty (**Reject H3**).

Based on the information above the formula below:

$Z = \rho^{zx}X + \rho^{zy} Y + \varepsilon^2$

$Z = 0.742X + 0.153Y + 0.503\varepsilon^2$

Note - Z: Customer Loyalty, Y: Customer Satisfaction, X: Service Quality

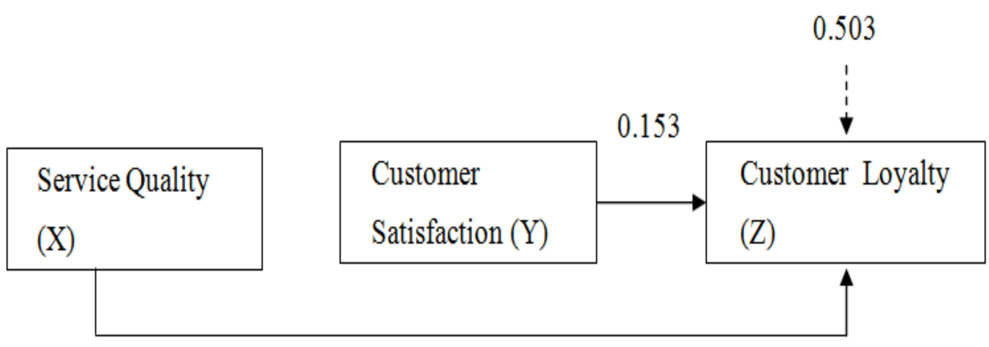

Figure 3. Sub-structural 2

Based on the test results, the path of the three variables are shown in Table 17 and Figure 3:

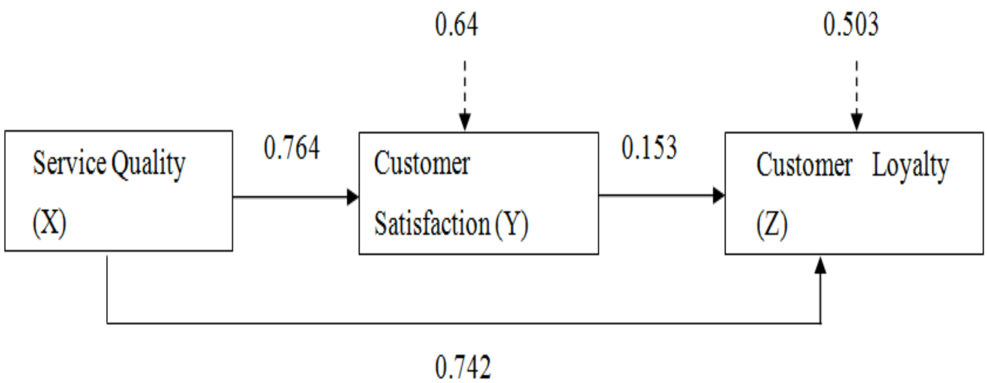

Figure 4. Path model summarisation

Table 17
Coefficients[a] sub-structural 2

Variable	Standardised Coefficient	Effect		
		Direct	Indirect* (through Y)	Total
X to Y	0.764	0.764		0.764
X to Z	0.742	0.742	0.764x0.153= 0.116892	0.859
Y to Z	0.153	0.153		0.153
ε_1	0.64	0.64		0.64
ε_2	0.503	0.503		0.503

Service quality has a positive and significant effect on customer satisfaction and customer loyalty. Improvement in service quality contributes to customer satisfaction and vice versa. Customer satisfaction is 58.37% based on while customer loyalty is 74.7% as direct result of service quality.

Even though there is no significant effect between customer satisfaction and customer loyalty, t the former has some positive effect contributing 51.84% to the latter.

CONCLUSION

The practical implications for online transport, especially GrabCar, are they should pay more attention to service quality as proven by this study which will lead to customer satisfaction and build loyalty. Fitzsimmons and Fitzsimmons (2011) state that customers in choosing a certain service provider will consider nine criteria: availability, convenience, dependability, personalisation, price, quality, reputation, safety, and speed.

Customer will consider things such as how accessibility and reliability of service. They will also consider whether the quality of the services is worth the price they are charging, and the reputation of the service provider, or how long they will have to wait for the service. These nine criteria need to be fulfilled by GrabCar as the service provider.

Limitation of this research is that it has only examined one online service provider (Grab) in addition to using the minimum sample size (100 respondents) to draw a conclusion. For further research it will be beneficial if the sample size is larger and the focus is on other competitors such as GoJek, Uber in Indonesia.

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Determinants of Performance and Civil Servant Intention to Leave: A Study of Mahakam Ulu Regency

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ABSTRACT

This study is aimed at analysing the effect of Emotional Intelligence, Quality of Work Life and Stress on civil servants of Mahakam Ulu Regency and their intention to leave. It uses descriptive verification method based on quantitative analysis of 100 civil servants. A Structural Equation Modelling (SEM) technique is used for analysis. Results show negative job performance is significantly associated with job stress and intention to leave; however, good job performance is significantly associated with Quality of Work Life (QWL) and emotional intelligence. The results also show a positive association between emotional intelligence and QWL to performance, with a negative relationship to intention to leave. Therefore, to improve the performance of employees, emotional intelligence, quality of work life and lowering work stress will reduce likelihood of employee's intentions to leave.

Keywords: Civil servants, emotional intelligence, intention to leave, performance, quality of work life, stress

INTRODUCTION

It is well known that Human Resources (HR) is one of the determinants of success of an organisation. Human resources are important to ensure success of an organisation by effectively and efficiently creating human-driven excellence.

Civil servants are responsible for the successful implementation of governance and national development so that the position and role of civil servants are very important as executor of the business activities of the Government in the framework of development. Performance is essential. In other words, civil servants have a decisive role, namely as thinkers, implementers, planners, and development controllers.

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According to the Secretary of Mahakam Ulu Regency, the number of civil servants in the regency of Mahakam Ulu Regency is 901, while in TKK and PTT there are 2,469 civil servants in the village, sub-district and district capitals (Avun, 2016). The differences between civil servants and contract labour (TKK) this is due to natural conditions and logistical issue. The cost of living is very expensive, especially for civil servants, therefore making it difficult for them to stay in the job. From the researchers' observation, the number of employees in Mahakam Ulu District with intentions to leave is quite high.

Intention to leave is the result of an individual's evaluation of continuation of his or her relationship with the organisation that has not yet been manifested in concrete action to leave the organisation. Tett and Meyer (1993) stated that intention to leave is the strongest precursor of actual turnover. This proves that before the employees actually leave the organisation, they have the intention to leave the company. Therefore, the identification of factors that influence intention to leave becomes an important consideration in determining effective methods to reduce actual turnover rates. Some researchers (Chikwe, 2009) use the term *turnover intention* or *intention to quit*, in lieu of *intention to leave*. The term *intention to leave* is used based on Social Exchange Theory. Social exchange theory is a concept used to understand workplace behaviour developed by Blau. It explains the intention to leave (Rifmawati & Suyasa, 2016).

It can be concluded performance, emotional intelligence, quality of work life, and stress all play a role in intention to leave. Several studies suggested intention to leave is negatively associated with performance (Das, 2012; Rusyandi, Sule, Joeliaty, & Muizu, 2016) emotional intelligence (Jang & George, 2011; Trivellas, Gerogiannis, & Svarna, 2011), and quality of work life (Huang, Lawler, & Lei, 2007; Lee, Dai, Park, & McCreary, 2013), while stress has a positive effect on intention to leave (Chiang & Chang, 2012; Luthans, 2007; Midina & Moegni, 2016; Wagner & Hollenbeck, 2010).

A number of studies: Afolabi, Awosola and Omole (2010); Chaudhry and Usman (2011); Cote and Miners (2006); Lopes, Grewal, Kadis, Gall and Salovey (2006); O'Boyle and Ernest (2010) showed the relationship between emotional intelligence and job performance is positive and significant. Other studies produced inconsistent findings in terms of the relationship between emotional intelligence and job performance (Bradberry, 2006; Meskhat, 2011; Shahzad, Sarmad, Abbas, & Khan, 2011) and the relationship between stress and performance (Midina & Moegni, 2016).

Therefore, this research will conduct an in-depth study on the factors or components that affect employees level of performance and intention to leave.

LITERATURE REVIEW

Relationship of Emotional Intelligence with Intention to Leave

Goleman (2009) explains that emotional intelligence is the ability to: analyse one's own feelings and emotions, motivate oneself, and manage emotions in their interaction with others. Employees with high emotional intelligence tend to be firm, optimistic, tolerant, and flexible because they are adept at understanding themselves and usually have a positive outlook (Griffeth et al., 2000). Emotional intelligence, in particular, has a negative relationship with intention to leave. This happens because emotional intelligence affects employees' interpersonal relationships with their bosses, peers, and jobs, so intention to leave is not likely to occur (Jang & George, 2011; Trivellas et al., 2011).

H1: Emotional Intelligence Negatively Affects Intention to Leave

Relationship between Quality of Work Life (QWL) and Intention to Leave

The term QWL was first introduced at the International Labor Conference in 1972, but became popular only after United Auto Workers and General Motors took the initiative to adopt QWL to change work systems. Japan is among the first country to implement QWL.

According to Mosadeghrad (2013), QWL is negatively associated with the intention to leave. Thus, it can be interpreted the higher the perception of QWL, the lower the intention to leave, and vice versa. This concept was developed by Huang et al. (2007). Lee et al. (2013) stated that the quality of work life has a significant effect on Intention to Leave. Therefore, the following hypothesis is proposed:

H2: QWL Negatively Affects Intention to Leave

Relationship of Stress with Intention to Leave

Stress is a psychological or physiological phenomenon that is an outcome of a mismatch between job demands and skills possessed by employees (Drenth, Thierry, & Wolff, 1998). There is evidence from previous research that shows the relationship between job stress and employees' intention of leaving an organisation. Work stress increases absenteeism, followed by an increased intention to leave and actual turnover, both of which are detrimental to the organisation (Luthans, 2007). Job stress does not only cause indirect losses to the organisation (i.e, the cost of a health restoration programme), but it is also a direct source of loss - especially in the form of absenteeism and the desire to leave the workplace (Chiang & Chang, 2012; Midina & Moegni, 2016; Wagner & Hollenbeck, 2010). Hence, the following hypothesis is developed:

H3: Stress Positively Affects Intention to Leave

Relationship of Performance with Intention to Leave

Harnoto (2002) states the intention to leave is the desire to move that has not yet resulted in the stage of realisation that is to move from one workplace to another. With the intention of changing jobs, employees will tend to generate negative-impact attitudes for companies such as finding more lucrative employment alternatives, frequently complaining and feeling unhappy with their work to the point they begin avoiding their responsibilities. Das (2012) identified performance variables on intention to leave, stating that performance acts as a moderating variable against the intention to leave variable, but Rusyandi et al. (2016) stated that the intention to leave directly affects performance. Thus, the following hypothesis is proposed:

H4: Intention to Leave Negatively Affects Performance

Relationship between Emotional Intelligence and Performance

A number of studies that investigated the relationship between emotional intelligence and job performance have found a positive and significant link (Afolabi et al., 2010; Chaudhry & Usman, 2011; Cote & Miners, 2006; Lopes et al., 2006; O'Boyle & Ernest, 2010). Other studies indicate inconsistencies in the relationship between emotional intelligence and job performance (Bradberry, 2006; Meskhat, 2011; Shahzad et al., 2011). Therefore, the following hypothesis is developed:

H5: Emotional Intelligence Positively Affects Performance

Relationship between QWL and Performance

According to Jamal (2007) and Springer (2011), job performance is an essential part of the relationship between organisation and management of human resource.

A number of studies indicate Quality of Work Life (QWL) positively and significantly affects employee's performance (Fallah, 2006; Pribowo, 2015); likewise, Arifin (2012), and Gayathiri and Ramakrishnan (2013) state that QWL greatly influences performance. Therefore, the following hypothesis is proposed.

H6: QWL Positively Affects Performance

Relationship of Stress with Performance

According to Robbins (2008), stress is a dynamic condition in which an individual is exposed to opportunities, demands, or resources associated with the individual's desires and the results are deemed uncertain and important. Many studies have investigated the stress-performance relationship. The stress-performance relationship is an inverted U shape. This means stress at low to moderate levels stimulates the body and improves the ability to act.

The relationship between *stress and performance* is one of the most researched phenomena in the field of psychology. Job stress is a common problem among employees it impacts job *performance*, although most contemporary studies highlight the negative effect of stress on performance. The results of a number of studies suggest that stress negatively and significantly affects employees' performance (Midina & Moegni, 2016).

H7: Stress Negatively Affects Performance

MATERIALS AND METHODS

The type of research used in this study is descriptive and verification.

Descriptive research

Descriptive research is used to analyse data by describing data that has been collected as it is without intending to make general conclusions. Data obtained will be analysed and interpreted in accordance with research objectives based on the following variables: Emotional Intelligence, Quality of Work Life, and Stress on Civil Servant of Government of Mahakam Ulu Regency.

Verification research

Verification research is used to test the hypothesis in accordance with the purpose of research, namely to determine emotional intelligence, Quality of Work Life, Stress and its effects on Performance and its impact on Intention to leave Civil Servants Government of Mahakam Ulu Regency.

The unit of analysis in this study is Mahakam Ulu District Government and observation unit is an employee of Mahakam Ulu Regency Government. There are 901 employees at the government of Mahakam Ulu District.

The model to be used in this research is the causality or relationship or influence model and to test the proposed hypothesis. The analysis technique used is SEM (Structural Equation Modelling) from LISREL statistician.

RESULTS AND DISCUSSIONS

An assessment of the overall fit of a model can be performed using the goodness of fit indicators.

Table 1
Overall fit of empirical model

No	Indicators	Cut-off	Calculate	Conclusion
1	Chi-Square	< 279,287 df 242	274,641	Good
2	Probability	≥ 0.05	0,073	Good
3	RMSEA	≤ 0.08	0,027	Good
4	GFI	≥ 0.90	0,890	Marginal
5	AGFI	≥ 0.90	0,863	Marginal
6	CMIN/df	≤2,00	1,135	Good
7	TLI	≥ 0.95	0,989	Good
8	CFI	≥ 0.95	0,990	Good

Of the 8 indicators, only 2 showed the model has a poor fit (marginal). Hence, it can be concluded the model has a good fit. The cut off value of the determination of a fit model is 6 from 8 criteria. Hypothesis testing of this research is done based on Critical Ratio (CR) value of a causality relationship from SEM.

Table 2
Regression weight of structural equation model

			Estimate	S.E.	C.R.	P
Performance	<---	Emotional intelligence	.307	.107	2.859	.004
Performance	<---	Quality of work life	.266	.104	2.547	.011
Performance	<---	Stress	-.808	.118	-6.874	***
Performance	<---	*Intention to Leave*	-.225	.064	-3.495	***
Intention to Leave	<---	Stress	.203	.100	2.020	.043
Intention to Leave	<---	Quality of work life	-.163	.082	-1.983	.047
Intention to Leave	<---	Emotional intelligence	-.178	.085	-2.098	.036

Hypothesis tests are done by looking at the value of significance of each variable to see the effect of independent variables on the dependent variable. If the value of significance <0.05, the influence of independent variables on the dependent variable can be accepted.

The following will present the results of the analysis of the direct and indirect effects of each of the independent variables, dependent variables and intervening variables.

Table 3
Direct and indirect variable effects

Hypotheses	Direct	Indirect	Total
Emotional intelligence – *Intention to Leave*	-0,141	-0,052	-0,193
Quality of work life– *Intention to Leave*	-0,153	-0,060	-0,213
Stress – *Intention to Leave*	0,175	0,157	0,332
Intention to Leave – Performance	-0,268	-	-0,268
Emotional intelligence – Performance	0,192	-	0,192
Quality of work life– Performance	0,222	-	0,222
Stress – Performance	-0,585	-	-0,585

The table above shows the results of testing the direct effect that occurs between latent variables exogenous and endogenous intervening and endogenous depending on it.

From the result, it can be described much influence directly (direct effects) of the latent variable exogenous to endogenous latent variables. The direct effects are the intention to leave on performance that is equal to 0.268. This means the latent variables contribute most directly to influence the performance of employees.

Besides aiming to see the direct effects, the present study also tried to see an indirect relationship that occurs between latent variable exogenous emotional intelligence, quality of work life and stress with a latent variable endogenous intervening intention of leave and latent variables endogenous depending on intention of leave in the hope of unknown significance path affects performance the from Mahakam Ulu employee. Testing indirect effect was done by looking at the test results of pathways through which, if all paths are significant then the indirect effect is also significant.

The results of the indirect relationships that occur between emotional intelligence, quality of work life and stress with a latent variable endogenous intervening intention of leave and latent variables endogenous depending on performance. It can be explained much influence indirectly (indirect effects) of the latent variable exogenous to endogenous latent variables. Indirect effects of emotional intelligence, QWL and stress on performance through the mediation of intention of leave are 0.052, 0.060 and 0.157 respectively. From the results of calculations, it can be seen the indirect effect between emotional intelligence, quality of work life and stress on intention of leave due to mediation by an intervening variable of performance

Results of conformity and statistical test are shown in Figure 1.

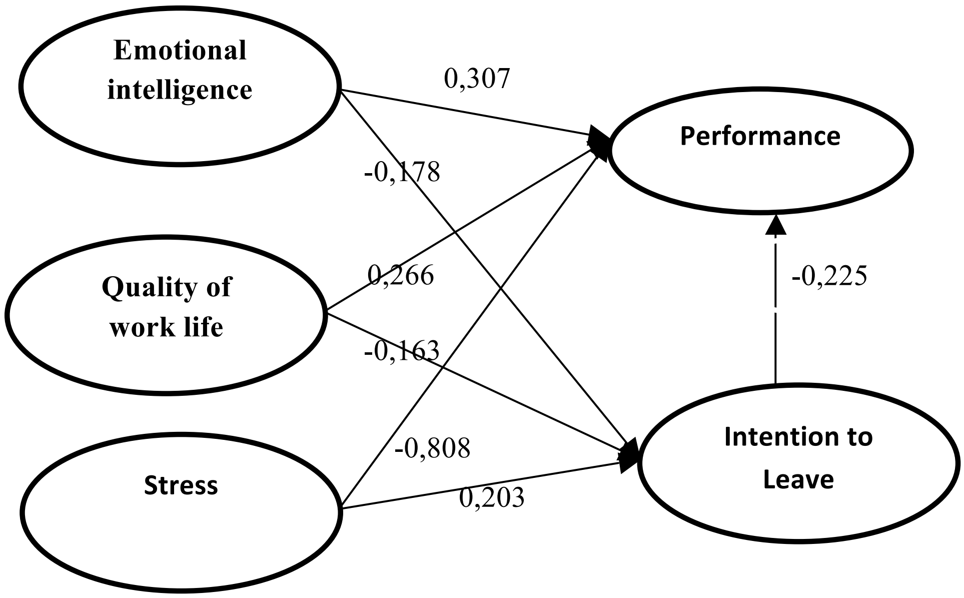

Figure 1. Empirical model

DISCUSSIONS

Parameter estimation of Emotional intelligence on Intention to Leave shows coefficient value with negative direction. Testing significance of the obtained value of C.R = -2.098 with probability = 0,036 <0,05. Significant values smaller than 0.05 indicate Emotional intelligence has a significant negative effect on Intention to Leave. Thus, it can be said Hypothesis 1 which states Emotional intelligence affects Intention to Leave is acceptable and supported research which is line with Jang and George (2011); Lee and Liu (2007); Trivellas et al. (2011).

Parameter estimation of the influence of Quality of work life to Intention to leave shows coefficient value with negative direction. Testing significance of the obtained value of C.R = -1.983 with probability = 0.047 <0.05. Significant values smaller than 0.05 indicate QWL lifestyle has a significant negative effect on Intention to Leave. Thus, it can be said that hypothesis 2 which states Quality of work life influences. Intention to Leave is acceptable and is supported by Huang et al. (2007), and Lee et al. (2013).

Parameter estimation of the influence of Work Stress on Intention to Leave shows coefficient value with positive direction. Testing significance of the obtained value of C.R = 2.020 with probability = 0.043 <0.05. Significant values smaller than 0.05 indicate that Job Stress has a significant positive effect on Intention to Leave. Thus, it can be said that hypothesis 3 that Work Stress affects Intention to Leave can be accepted and this is supported by Chiang and Chang (2012); Midina and Moegni (2016); Wagner and Hollenbeck (2010).

Parameter estimation of the influence of intention to leave shows coefficient value with negative direction. Testing significance of the obtained value of C.R = -3.495 with probability = 0.000 <0.05. Significant values smaller than 0.05 indicate that performance has a significant negative effect on Intention to Leave. Thus, it can be said hypothesis 4 that Intention to leave effect Performance is acceptable and supported by Rusyandi et al. (2016).

Parameter estimation of the influence of Emotional intelligence on Performance shows coefficient value with positive direction. Testing significance of the obtained value of C.R = 2.859 with probability = 0.004 <0.05. A value of significance smaller than 0.05 indicates emotional intelligence has a significant positive effect on Performance. Hence, hypothesis 5 that Emotional intelligence affects performance is acceptable and this is supported by Afolabi et al. (2010); Chaudhry and Usman (2011); Cote and Miners (2006); Lopes et al. (2006); O'Boyle and Ernest, (2010).

Parameter estimation of the influence of QWL on Performance shows coefficient value with positive direction. Testing significance of the obtained value of C.R = 2.547 with probability = 0.011 <0.05, of significance smaller than 0.05 indicates that QWL has a significant positive effect on performance. Hence, it can be said that hypothesis 6 that QWL influences performance is acceptable and this is supported by Arifin (2012); Fallah (2006); Gayathiri and Ramakrishnan (2013); Pribowo (2015).

Parameter estimation of influence of Work Stress on Performance shows coefficient value with negative direction. Testing significance of the obtained value of C.R = -6.874 with probability = 0.000 <0.05 of significant value smaller than 0.05 indicates that Work Stress has a significant negative effect on Performance. Thus, it can be said hypothesis 7 that Work Stress affects performance is acceptable and is supported by Midina and Moegni (2016).

CONCLUSION

Performance of employees can be improved via emotional intelligence, QWL and reducing stress. High stress leads to Intention to leave and therefore, in order to ensure optimal work performance among employees, emotional intelligence and good QWL are essential

The findings of this study are useful for policymakers and employers to address stress among employees and improve their performance and use it as a predictor for intent to leave. Future research could utilise this study's model to examine the correlation between job stress, emotional intelligence, quality of work life and intention to leave among employees on a broader scale, namely in other work environments, and other regions strengthen generalisability of these findings.

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The Influence of Corporate, User, and Product Images on Purchase Decision of Nitrogen at PERTAMINA Gas Stations

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ABSTRACT

The objective of this paper was to examine the impact of brand image on purchase decision of nitrogen at PERTAMINA Gas Stations. It used associative research and data was collected through a field survey from three Green Nitrogen outlets at different PERTAMINA Gas Stations. A set of questionnaires was distributed to 114 customers of green nitrogen outlets in Jakarta. Multiple regression analysis assessed the impact on purchase decision of three key constructs of brand image, including corporate image, user image, and product image. The results showed three components, namely corporate image, user image, and product image simultaneously had a significant influence on the purchase decision. However, corporate image and product image were variables that had a significant influence. Product image was a variable that had the most significant influence, while user image had no significant influence on purchase decision.

Keywords: Brand image, corporate image, product image, purchase decision, user image

INTRODUCTION

Flat tyres are a bane for drivers. However, a survey of 10 drivers on "What is the biggest concern before driving a car?" showed that 6 drivers cared for the body of the car, 3 stressed on the importance of fuels indicator, and only 1 checked the conditions of their tyre (Wijaya, 2013).

The respondents had used tire air produced by the compressor, which is not good for tyres. The air in the tire consists nitrogen (78%), oxygen (20%), water, and other gases such as carbon and hydrogen. These elements may cause instability, such

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as expansion of tyres during the heat or deflation during low temperatures. If this issue is ignored, accidents happen when the tyres burst.

Nitrogen is an option but it is difficult to change the purchasing behaviour of consumers due to their force of habit. According to Wijaya (2013), the air produced by Nitrogen Generator, namely nitrogen gas, can provide stable temperatures. Nitrogen is deemed unique because it is an odourless compound, non-toxic, non-flammable or, and does not readily react with other compounds.

Natural air produced by the compressor is what is mostly commonly used in tyres. This contains various elements, such as nitrogen (78%), oxygen (20%), water, carbon, hydrogen, and others.

The air produced by the compressor is not good as the presence of oxygen can cause a sudden increase in the temperature which will in turn increase the pressure on the tyres and the latter will burst on impact. In contrast to the nitrogen produced by Nitrogen Generator, this machine can separate various elements contained in the natural gas into a single element, namely nitrogen gas. Excess nitrogen gas in tyres can avoid an increase in temperature to reduce the likelihood of the tyre bursting.

Purchasing decisions as defined by Peter and Olson (2000) is a process of integration that combines the knowledge to evaluate the behaviour of two or more alternatives and choose one of them. According to Schiffman and Kanuk (2008), if consumers do not have experience with a product, they tend to trust preferred or famous brands.

According to Lin and Lin (2007), the company should strengthen its brand position to create a positive and strong brand image in the minds of consumers so that they recognise the product, evaluate the quality, reduce the risk of purchase, and gain experience and satisfaction of certain product differentiation.

Awareness of the benefits of nitrogen for tyres is long overdue and businesses should advertise heavily so drivers know where they can source nitrogen for their tyres. It took a year for nitrogen to become popular and be a choice for society.

Green Nitrogen is a brand image t at PERTAMINA Gas Stations. It is difficult to change consumer's purchasing behaviour that has become a habit as evident from previous research that showed drivers are not aware of the Green Nitrogen brand image, which has impacted negatively on consumer's purchase.

In order to popularise Green Nitrogen, the management designed its outlet logo to be both appealing and easy to recognise. The colour red has an instant appeal and the logo "Nitrogen, enhances the tyre performance" embedded in the building outlet is easily recognised by customers. In this way, customers will look for nitrogen service at the gas stations. The logo eventually became the brand for Green Nitrogen throughout PERTAMINA's gas outlets in Indonesia.

The location and accessibility of Green Nitrogen outlets at PERTAMINA Gas Stations is a key to its success. Before this, only tyre shops and big workshops were supplying nitrogen. Nitrogen was given free with tyre purchases while the workshops offered it as complementary to repair services to.

Hence, nitrogen is not easily available Thus, drivers who want to get nitrogen can be served without having to replace their tyres or go to can access PERTAMINA Gas Stations as an alternative outlet. The outlets also offer excellent after-sales service.

Dodds and Grewal (1991), and Grewal, Monroe and Krishnan, (1998) reported that consumer purchase decision is high if the product or service has higher brand awareness. Biel (in Li, Wang, & Cai, 2011) revealed that purchasing decision was influenced by brand image, where the influencing variable consists of three components: corporate image, user image, and product image. However, Lin and Lin (2007) found that purchasing decision was influenced not only by brand image but by product knowledge as well.

The aim of this research is examine the influence of brand image on consumer purchasing decisions in the context of nitrogen filling services at PERTAMINA Gas Stations.

LITERATURE REVIEW

A company's main aim is profit by boosting its brand image. The company's success in developing its brand image will have a positive impact on the decision to purchase a product or service. Brand image is the perception of the consumer associated with the brand (Ferrinadewi, 2008).

The components of brand image according to Biel (in Li et al., 2011) are corporate image, user image, and product image. The company's image is a picture of the company in the eyes of consumers based on their knowledge, feedback, and experience of the said company. The image is associated with a feature of a consumer brand while product image is a picture of the product in the eyes of consumers based on knowledge, as well as the consumers experience of the product or service (Rachmawati, Sary, & Perdani, 2016). In short, these three components make up an image of a brand.

This study determines the effect of the brand image on purchase decision of Nitrogen at PERTAMINA Gas Stations in Jakarta. Independent variables used in this study are corporate image, user image and product image and the dependent variable is the purchase decision.

Rising consumer consciousness has made them choose familiar and favourable brands which has led to intense competition among the brands. MacDonald and Sharp (2000) mentioned that even though consumers are familiar with and willing to purchase a product, brand awareness is still a major factor in influencing their purchase decision. When consumers want to buy a product, a brand comes quickly to their minds. It reflects that a product has higher brand awareness. Consumers' purchase decision can be an influence if a product has higher brand awareness (Dodds & Grewal, 1991; Grewal et al., 1998).

Purchasing decision is a process of integration that combines the knowledge to evaluate the behavior of two or more alternatives and choose one of them (Peter & Olson, 2000). In general, consumer purchase decision is to buy the most preferred brand (Kotler & Amstrong, 2008).

Oentoro (2010) revealed that consumer purchase decision is a set of decisions that consider the following aspects: (1) selection of the product type; (2) choice of the form of the product; (3) choice of the brand; (4) choice where and who the seller is; (5) decision of how much to purchased; (6) decision of the time of purchase; and (7) decision on how to pay.

Brand image is perceptions and belief held by consumers, as embedded in their memory (Kotler & Keller, 2009). Brand image is the key driver of brand equity, which refers to consumer's general perception and feeling about a brand and has an influence on their behavior (Zhang, 2015).

According to Kotler and Keller (2009), and Zhang (2015) brand image is a picture or impressions generated by a brand in the minds of customers. Creating a positive brand image that remains strong in the minds of consumers is vital. When a brand has a strong and positive image in the minds of consumers, it will always be remembered, and there is a big likelihood for the consumer to buy the brand in question.

Biel in Li et al. (2011) found brand image has three components: corporate image, user image, and product image. The image of a company is an individual evaluation of it (Surachman, 2008). Li et al. (2011) opined the user image refers to whether the brand personality is matches the consumers.

According to Baseer Ali Durrani, Godil, Baig and Sajid (2015), brand images are evaluated against numerous reference points such as product category image, social image and self-image that influence consumers' reactions to a given brand, including brand attitude, brand preference, and brand loyalty.

Baseer Ali Durrani et al. (2015) and Zhang (2015) explained brand image gives significant influence towards purchasing decision, meaning that consumers always pay attention to the brand image before they make a purchase decision.

Research Framework

Figure 1 shows the three key constructs of brand image, including corporate image, user image, and product image which is hypothesised to influence consumer purchase decision.

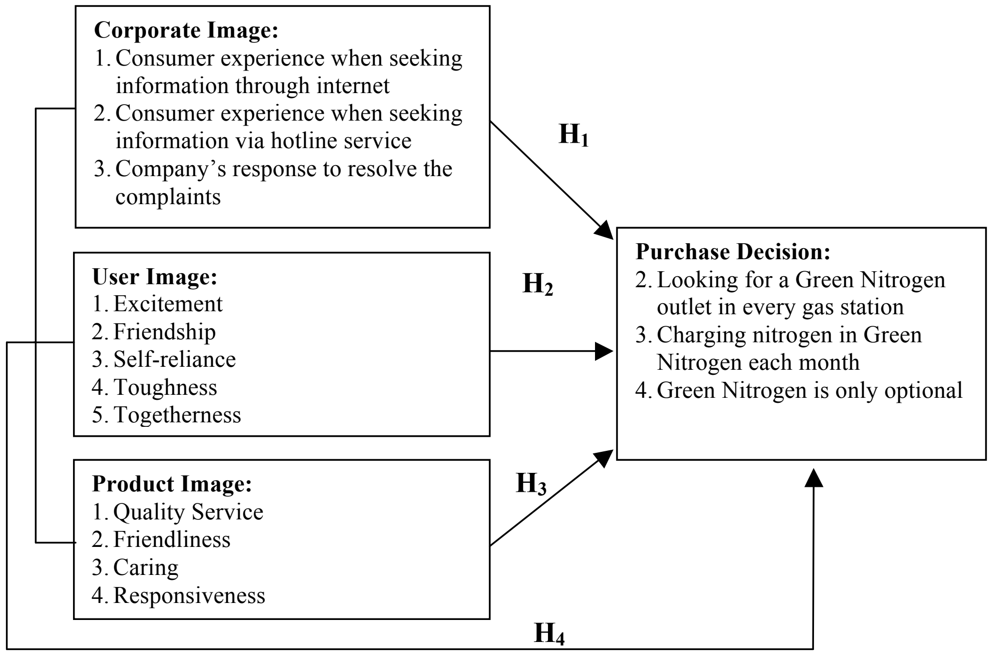

Figure 1. The research framework

Figure 1 shows three independent variables, namely Corporate Image, User Image, and Product Image affect the Purchase Decision (Baseer Ali Durrani et al., 2015; Li et al., 2011). This study will test the level of significance of these three variables on purchase decision. Biel in Li et al. (2011) revealed brand image significantly influences purchasing decisions. So, in this study its influence will be tested using multiple regression analysis. Indications of significance level are marked by influence of value of beta coefficient regression of these three variables. Explanation measurements in each variable uses indicators developed by Biel in the previous study as seen in Baseer Ali Durrani et al. (2015); Li et al. (2011).

Corporate image is a Green Nitrogen consumer's judgment based on the consumer's knowledge, feedback, and experience of the company concerned. The Green Nitrogen company is measured by indicators such as 1 consumer experience when seeking information about the company through the Internet: (2) consumer experience when seeking information via the hotline service; and (3) company's response to resolve the complaints.

User image is a set of consumer characteristics associated with the characteristics of the brand of Green Nitrogen. This variable was measured using the indicators (1) excitement; (2) friendship; (3) self-reliance; (4) toughness; and (5) togetherness.

Product image is a picture of the Green Nitrogen service in the eyes of consumers based on their knowledge, response, and experience for the product concerned. This variable is measured using the following indicators]: (1) quality service; (2) friendliness; (3) caring; and (4) responsiveness.

Purchase decision is consumers' action to choose the services they need. This variable is measured by using several indicators: 1) consumers recognition of a Green Nitrogen outlet in every gas station; (2) customers charge nitrogen at a Green Nitrogen outlet every month; (3) Green Nitrogen is only optional.

MATERIALS AND METHODS

Data was collected through a field survey from three Green Nitrogen outlets at different PERTAMINA Gas Stations. The sampling frame consisted of customers of the volunteer gas stations. Systematic quasi-random sampling selected every customer who entered the store on one day of the survey, starting from the first to come through the doors at the start of business, from 7 a.m. until 9 p.m. This sampling method was chosen because it allowed analysis of possible bias or error selection (Sher & Trull, 1996).

This is an associative research, and data was obtained from questionnaires based on previous studies and the relevant literature. The respondents are 114 Green Nitrogen customers who have been routinely charging nitrogen every month through the Green Nitrogen network. Questionnaires were filled by the research officer to ensure no error in filling the questionnaire. Measurement scale uses the Likert scale with 1 showing Strongly Disagree to 5 showing Strongly Agree. Multiple regression analysis assessed the impact on purchase decision of three key constructs of brand image, including corporate image, user image, and product image.

RESULTS AND DISCUSSIONS

The purchase decision to use nitrogen is a direct result of brand image built by Green Nitrogen as a pioneer of nitrogen services at PERTAMINA Gas Stations. Consumers benefitted from the use of nitrogen for vehicle tyres over ordinary air, meaning that Green Nitrogen had succeeded in changing perceptions of consumers about the benefits of nitrogen over natural air.

Based on data analysis, brand image, including corporate image, user image, and product image have a significant influence on the purchase decision. However, only corporate image and product image have a significant effect. Of the three variables, the product image is the most dominant in influencing the purchase decisions.

The results of the t-test, variable corporate image (X1) and variable product image (X3) proved to have a significant influence on purchasing decisions. This is based on the significance of these two variables, namely X1 is $0{,}000 \leq 0.05$ and X3 is $0.000 \leq 0{,}000$. If the image of the user variable (X2) has a significance value of $0.199 > 0.05$, the image of the user variable (X2) proves to have no influence on purchasing decisions. Thus, the second hypothesis of this study could not be verified. Product image variable (X3) has a dominant influence on purchasing decisions with beta coefficients 0,455.

The result of the coefficient of determination (R2) testing indicates the coefficient of determination (R-Adjusted Square) amounted to 0.561. This means three independent variables, namely X1 (Corporate Image), X2 (User Image), and X3 (Product image), have the effect of 0.561 or 56.1% to variable Y (Purchase Decision). The rest are due to variables (such as price, location, service quality) not examined in this study. These results showed the three variables are important in purchase decisions.

Table 1
Relationship between brand image and purchase decision

No	Variables	Beta coefficients	*t*-value (*p*-value)
1.	Constant	1.063	3.839 (0.000)
2.	Corporate image	0.353	4.175 (0.000)
3.	User image	0.095	1.291(0.199)
4.	Product image	0.455	6.127 (0.000)

Notes: R Adj. Square= 0.561; *F* = 49.042; Sig F= 0.000

The results of regression analysis summarised in Table 1 show that corporate image, user image, and product image contribute significantly to purchase decision (F= 49.042; p = 0.000). The results of this study proved brand image influences customers' purchasing decisions which is supported by earlier studies, such as Li et al. (2011) that brand image significantly affects purchasing decisions. Richardson et al. in Gilaninia and Mousavian (2011) pointed out that brand image is often used as an extrinsic condition to make a purchase decision. If consumers do not have the experience with a product, they tend to trust famous brands (Schiffman & Kanuk, 2008). A brand that has a positive image is likely to reduce risk of purchasing.

From the foregoing, it is clear product image is the variable that can explain significantly consumer's purchase behaviour based on the product image, which includes quality service, friendliness, caring, and responsiveness that make the consumers prefer Green Nitrogen outlets. Hence, they have a positive image of Green Nitrogen in their minds.

The second variable that has a significant influence on purchasing decisions is the corporate image. Companies which have a good image will be the choice of customers. A positive image can be built through the internet, a hotline service, and field personnel who meet directly with consumers.

User image has no significant influence on consumer purchase behaviour. This results from consumers' confidence about the quality of service provided by Green Nitrogen.

However, the three components of brand image, namely the corporate image, user image, and product image simultaneously have a significant influence on the purchase decision.

As the pioneer in providing nitrogen service, the positive image that has been built by Green Nitrogen as well as its service quality are the primary reason why consumers choose its product, nitrogen.

Therefore, the company's ability in building a positive image as a pioneer of nitrogen services and the company's ability to build a positive image as a reputable company are key attractions for the consumers. Consumers firmly believe the company has been selling quality services. Although consumers have not been accustomed to using nitrogen for their tyres, the company's ability to build trust has given it a positive image.

In the end, the power is in the hands of consumers and hence, companies must be able to read the profile of consumers in building the brand image so that the brand can be remembered and purchased by the consumers. This study has shown product image and corporate image are two important factors that must be developed by the company.

Green Nitrogen is an example of popular brand image. Although PERTAMINA is already famous, it has to continuously reinforce its brand image to ensure consumer loyalty to Green Nitrogen to maintain its domination of the market share (for nitrogen services). The brand can be strengthened using social media, such as Facebook, WhatsApp, and Instagram, in addition to the mainstream online media such as detik.com, viva news, merdeka.com, the global franchise, and others. For Green Nitrogen, offline media remains to be explored.

This study is useful to decision makers of companies to improve brand image for retaining customers and boost brand loyalty. Strengthening the brand image is an ongoing effort by exposing it to various types of online and offline media. Companies that do not believe brand image reinforcement will be easily forgotten to have a direct impact on its sales. The high level of competition from various brands will affect consumer purchasing decisions. Consumers tend to choose famous brands that are exposed in various media. Thus, top brands are those that continuously improve their brand image.

CONCLUSION

This study has shown a change in consumer buying behaviour in switching from natural air to nitrogen. This change in behavior is due to Green Nitrogen's ability to successfully build a brand image for its nitrogen services at PERTAMINA Gas Stations. Consumer purchasing decisions are influenced by brand image of Green Nitrogen. Nitrogen-loaded tyres can also support safety. These achievements have an impact on consumer's preference, namely switching to nitrogen.

The results showed constructs of corporate image, user image, and product image together have a significant influence on the purchase decision. However, only corporate image and product image have a significant influence individually while product image has the most dominant influence on purchase decision.

The study has limitations, namely only three gas stations were examined and hence, findings cannot be generalised. Future research can look at pricing, the choice of location and quality of service on purchase decisions.

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A Six Sigma Application for the Reduction of Floor Covering Defects

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ABSTRACT

Quality of a product is a key to improving a company's competitiveness. PT. "X" is a company engaged in plastic waste processing. It converts the waste into a floor carpet. The purpose of this study was to determine the number of sigma levels generated by PT. "X" in producing Floor covering, what caused the defects and how to reduce defective products using Six Sigma methods based on DMAIC step. Data for the study was collected from interviews and production statistics. The results showed the level of product quality was sigma 3.67, which is an average industry standard for Indonesia. Further, it was found that man (worker) is the major factor for occurrence of defective products. Therefore, a new employment policy at PT. "X" is needed.

Keywords: Defective products, DMAIC, quality control, Six Sigma

INTRODUCTION

Successful strategies using differentiation, low cost, or response are part quality management. Increases in sales can occur if the company has responds quickly both in increasing or decreasing their selling prices and increasing their reputation based on the quality of the product. When these steps are done correctly, the organisation usually can satisfy their customers and gain competitive advantage (Heizer, Render, & Munson, 2016).

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PT. "X" is engaged in plastic processing industry. Currently, its focus is on producing floor covering with PVC as the basic ingredient. PT. "X" has two types of product: 2-layer products (bottom layer and printing) and 3-layer products (bottom layer, printing and mica layer). The company is currently experiencing problems with product defects, with "Pataya 20 M" and "Original 20 M" as 2-layer products which have a high percentage of defects. This happens because of the incompatibility of the products based on the established company standards. The company's tolerance for defective products is 2% -2.5%, while the percentage of defective products for Pataya 20 M is 4.49% and for Original 20 M is 4.31%. Therefore, a tool to reduce defects, minimise variation as well as improve capability in manufacturing processes is Six Sigma (Kabir, Boby, & Lutfi, 2013).

Six Sigma is a management philosophy that focuses on eliminating errors, waste and rework. The Six Sigma implementation framework has many versions. A widely used version is DMAIC (define-measure-analyse-improve-control) that systematically helps organisations solve problems and improve the process (Hadidi, Bubshait, & Khreishi, 2017; Jirasukprasert, Arturo Garza-Reyes, Kumar, & Lim, 2014). Several previous studies have demonstrated the successful application of Six Sigma with DMAIC. Among them is Hadidi et al. (2017) on the extruded aluminium profile, Sanny, Scherly and Novela (2016) on the tofu production, Laosiritaworn, Rangsee, Chanduen and Klanarong (2015) in the lost-wax casting, Jirasukprasert et al. (2014) on the manufacturing process of rubber gloves.

Based on the above description, to overcome the problems faced by PT. "X" and considering the limited studies that discussed the use of Six Sigma in the floor covering industry with PVC as the basic materials, this study was aimed at finding out (1) how many sigma levels were generated by PT. "X" in producing floor covering, (2) factors which caused the defective products and (3) how to reduce the defective products at PT. "X".

LITERATURE REVIEW

Total Quality Management (TQM) focuses on quality that requires continuous improvement that includes people, tools, suppliers, materials, and procedures. It is important because quality decisions affect each of the 10 decisions made by the operations manager. One of the most effective TQM programmes is Six Sigma (Heizer et al., 2016).

Six Sigma is an approach first introduced by Motorola in 1986, focusing on improvements relating to process and quality by identifying the causes of errors and reducing variability. This methodology is known as a powerful tool for process improvement with wide applications in many industries (Hadidi et al., 2017). Six Sigma's goal is to increase profit margins, improve financial conditions by minimising the level of defective product (Kabir et al., 2013).

The Six Sigma has two methodologies which consist of:

Six Sigma – DMAIC (Define, Measure, Analyse, Improve, Control)

Design for Six Sigma (DFSS), DMADV (Define, Measure, Analyse, Design, Verify).

The DMAIC model is used when it is applied to an existing product, process, or service performance improvement and when the goal of the project is the development of product, process or service which is redesigned radically. DMADV is part of the Six Sigma toolkit design (DFSS) (Pyzdek & Keller, 2010). It consists of five main stages (Pyzdek & Keller, 2010):

"Define the goals of the improvement activity and incorporate into a Project Charter. Obtain sponsorship and assemble team."

"Measure the existing system. Establish valid and reliable metrics to help monitor progress toward the goals which is defined at the previous step. Establish current process baseline performance using metric."

"Analyse the system to identify ways to eliminate the gap between the current performance of the system or process and the desired goal. Use exploratory and descriptive data analysis to help you understand the data. Use statistical tools to guide the analysis."

"Improve the system. Be creative in finding new ways to do things better, cheaper, or faster. Use project management and other planning and management tools to implement the new approach. Use statistical methods to validate the improvement."

"Control the new system. Institutionalize the improved system by modifying compensation and incentive systems, policies, procedures, MRP, budgets, operating instructions and other management systems. You may wish to utilize standardization such as ISO 9000 to ensure that documentation is correct. Use statistical tools to monitor stability of the new systems."

Several previous studies have shown the successful application of Six Sigma by using DMAIC. Hadidi et al. (2017) showed DMAIC can significantly reduce aesthetic defects in the extruded aluminium profile by reaching the Four Sigma quality level. Laosiritaworn et al. (2015) using DMAIC was able to reduce damaged mould and leak in lost-wax casting. In addition, Jirasukprasert et al. (2014) applied DMAIC framework to reduce defects in the rubber gloves manufacturing process from 19.5 to 8.4 percent.

Although some previous studies have demonstrated the successful application of Six Sigma with DMAIC, according to Wu, Yang and Chiang (2012), its implementation must pay attention to several determinants of its success, including executive management support, leadership, cohesiveness of members, and resource management. In addition, Goh (2010) suggested industries should take advantage of the power of Six Sigma which he called "triumphs" and be careful not to become victims who are not aware of the weaknesses they call "tragedies." However, Hadidi et al. (2017) asserted that Six Sigma methodology is a well-known quality improvement framework that is used to control defects in quantities (quantitative data) such as weight and altitude, but also to control qualitative data as well as aesthetic.

MATERIALS AND METHODS

This is a descriptive study. This research was conducted between January 2015 and June 2016 with PT. "X" as the research object. The instruments used in data collection are literature review as well as field research through interviews and observations. Data was analysed using *Six Sigma* which is based on using *DMAIC* (*Define, Measure, Analyse, Improve and Control*).

Definition

In this first stage, a SIPOC diagram was created by identifying the Supplier (all suppliers involved), Input (all inputs into the process), Process (process which will be improved), Output (all output coming from process), and Customer (those who receive output from the process) (Basu, 2009). Supplier, Input, Process, Output, and Customer data from PT. "X" is obtained from production process data and interview results with General Manager and Manager of HRD PT. "X". The author also uses the CTQ (Critical to Quality) tool, which is used to describe the main output characteristics of a process (Basu, 2009).

Measurement

In this stage, a Control Chart is created to monitor the stability of a process and to study process changes from time to time (Heizer et al., 2016). P-Chart is created using production data, and defect product data owned by PT. "X", are then calculated according to the formula (Heizer et al., 2016):

Lower Control Limit (LCL): $\bar{p} - 3\sqrt{\frac{\bar{p}(1-\bar{p})}{n}}$ (1)

Upper Control Limit (UCL): $\bar{p} + 3\sqrt{\frac{\bar{p}(1-\bar{p})}{n}}$ (2)

The DPMO (Defect per Million Opportunities) measures where the position of product quality level of PT. "X" at this time using the data production and data defect products owned by PT. “X” which is then calculated using the formula DPMO (Wahyani, Chobir, & Rahmanto, 2010) as follows:

$$\textbf{DPMO} = \frac{1{,}000{,}000 * \text{The number of defects found}}{\text{Number of units checked} * \text{Number of CTQ}} \quad (3)$$

The sigma level is often associated with process capability, which is calculated in defects per million opportunities. Some levels of sigma are:

Table 1
Level of sigma achievement

%	DPMO	Sigma Level	Description
31%	691.462	1-sigma	Very uncompetitive
69.20%	308.538	2-sigma	Average industry of Indonesia
93.32%	66.807	3-sigma	
99.379%	6.210	4-sigma	Average industry of USA
99.977%	233	5-sigma	
99.9997%	3,4	6-sigma	World-class industry

Source: Wahyani, Chobir and Rahmanto (2011)

The next step is to create a Pareto Chart that is used to identify the cause of poor quality. Data used is the frequency of types of defects in PT. “X”.

Analysis

This stage determines factors that affect the production process, as well as the desired output or target of a process by using Cause & Effect Diagram or Fishbone Diagram (Russell & Taylor, 2011). The next step is making FMEA (Failure Mode and Error Analysis), a systematic approach to identify all possible failures in a design, manufacturing process or service process (Verma & Boyer, 2010).

Improvement

After identifying the root of the problem and validating it, it is necessary to take corrective action to the problem by testing and experimenting to optimising the solution so that it is really useful to solve the problem (Russell & Taylor, 2011). This is done via brainstorming which is a tool used to obtain the best ideas from every member of the team which is done in a structured (Round Robin) and unstructured (Free Wheeling) way (Basu, 2009). The ideas can be based on the results of previous research by creating an Effort Benefit Matrix that is a graph that discusses all the details of potential initiative gained compared to effort within the required timeframe and resources (Meran, John, Roenpage, Staudter, & Lunau, 2013).

Control

The last stage is the Control phase that provides suggestions to improve the standard operating procedures or existing production systems. These proposals are expected to improve the quality of products that can be maintained and prevent similar potential problems.

RESULTS AND DISCUSSIONS

Define

In the early stages, the production process from raw materials to finished goods is clarified, namely floor covering by looking at five variables to clarify SIPOC (Supplier, Input, Process, Output and Customer) diagram.

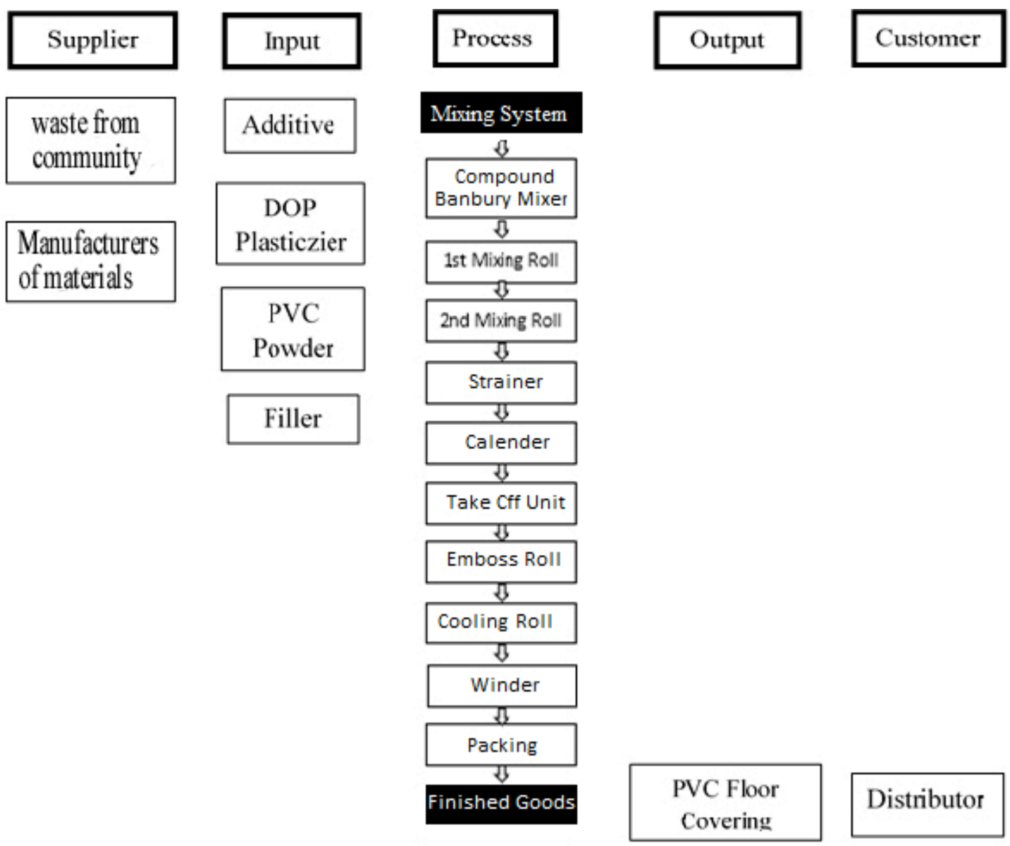

Figure 1. SIPOC

What are the factors that affect the quality of Floor Covering products? Based on the interview result, these factors are Man, Machine, Method, Material, and Environment. In addition, the type of defect in the floor covering products are hollow, folded, early pull and the position of motives or colours that are not appropriate.

Table 2
Critical to quality

No	Type of defect	Explanation
1	The carpets are hollow	This is a result of the remaining foreign particles from the raw material which are not filtered thoroughly using Strainer; the raw materials that become the sheet will be seen as hole calendar process.
2	Early pull	The distance between the first withdrawal process of the previous roll and the next roll causes the tip of the carpet to be unfilled. This happens in the Emboss Roll process
3	Folded	Inaccurate method causes the arrangement between Calendar and Take Off Units to be unstable, so the machine does not roll well and crease.
4	Motive position and colour is not appropriate	Motifs and colours produced by the Emboss roll process, not in accordance with predetermined positions.

Measurement

In this stage, Pareto analysis, Control and DPMO calculation is done to see the level of sigma PT. “X” in producing floor covering. From the Pareto chart analysis, it is clear the largest type of defect of the two types of floor carpets (Pataya 20M and Original 20M) is the folded and early pulled (Figures 2 & 3).

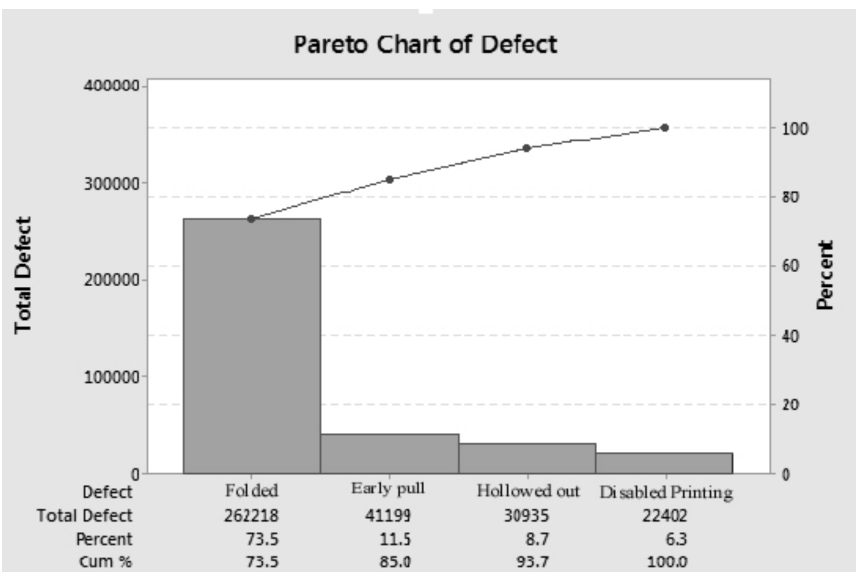

Figure 2. Pareto chart of Pataya 20M

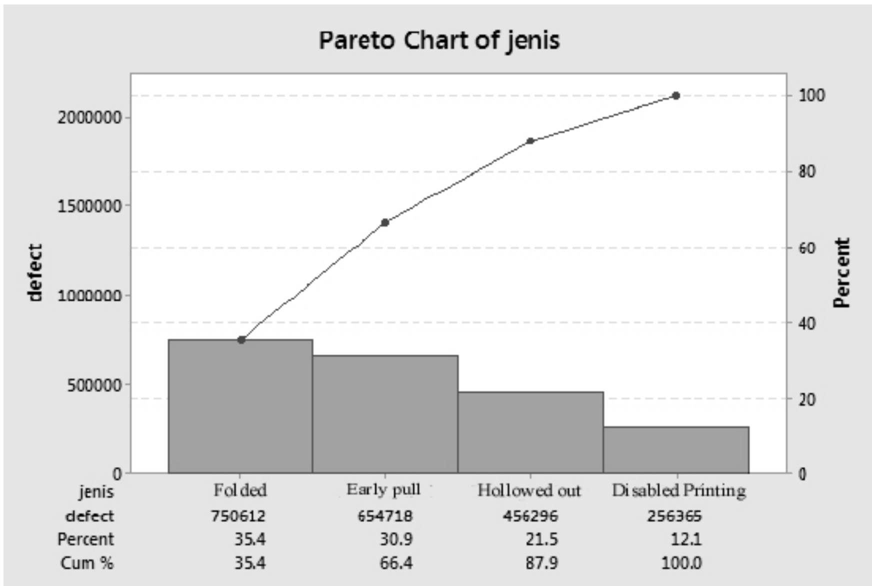

Figure 3. Pareto chart of Original 20M

The Control Chart tool shows the production process conducted by PT. "X" is still out of control and needs supervision (Figures 4 & 5).

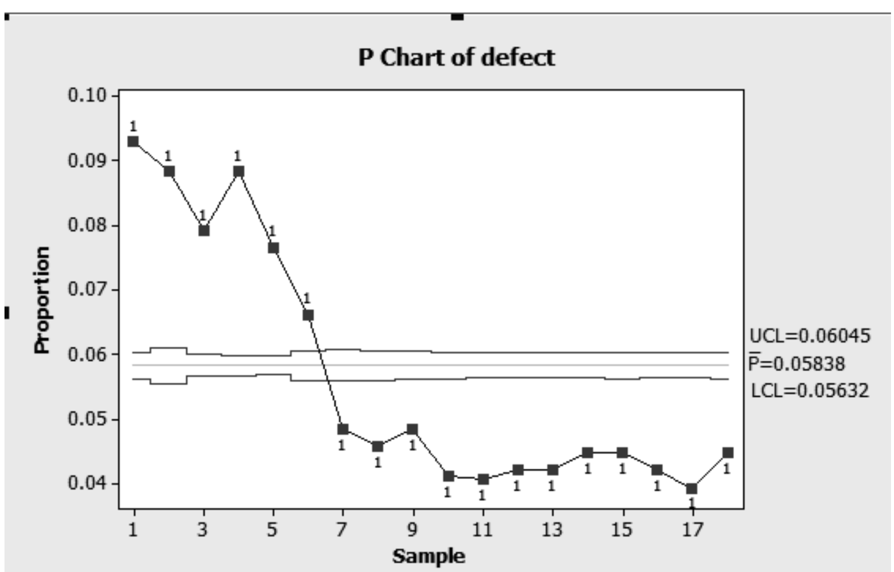

Figure 4. P-Chart Pataya

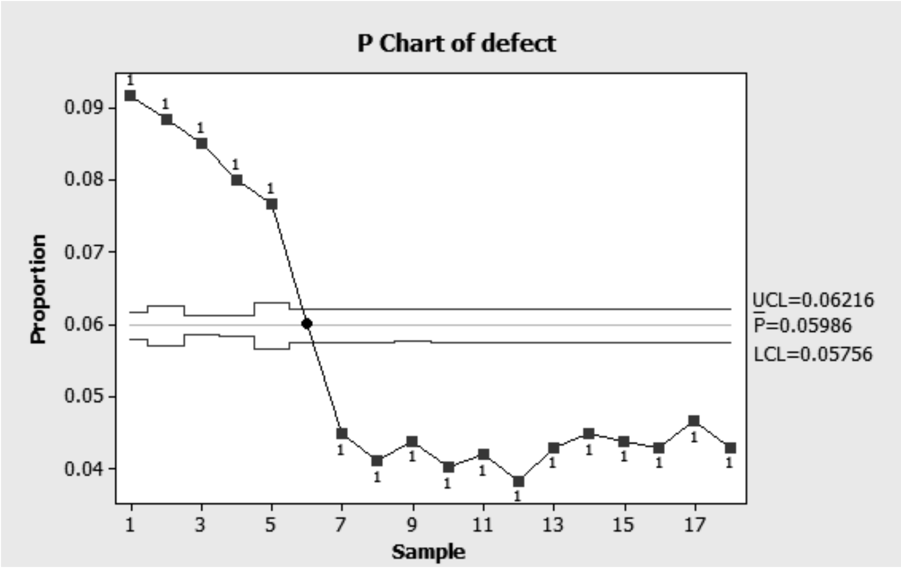

Figure 5. P-Chart Original

The DPMO tool (Defect per Million Opportunities) shows the product quality achieved by PT. "X" in producing floor carpet. Table 3 shows the result of DPMO for Pataya 20 M and Original 20 M:

Table 3
Defect per million opportunities (DPMO) Pataya 20 m

Month	Production Total	Defect Total	Opportunities	Defect Per Unit	DMPO	Sigma Level
January	119,158	11078	4	0.092968999	23242.24979	3.5
February	66,939	5919	4	0.088423789	22105.94721	3.5
March	167,787	13287	4	0.079189687	19797.42173	3.6
April	215,275	19035	4	0.088421786	22105.44652	3.5
May	238,520	18280	4	0.076639276	19159.81888	3.6
June	94,205	6245	4	0.066291598	16572.89953	3.6
July	86,203	4183	4	0.048524993	12131.24833	3.8
August	94,383	4323	4	0.04580274	11450.68498	3.8
September	105,184	5104	4	0.04852449	12131.1226	3.8
October	114,750	4730	4	0.041220044	10305.01089	3.8
November	125,163	5103	4	0.040770835	10192.70871	3.8
December	135,803	5723	4	0.042141926	10535.48154	3.8

Table 3 *(continue)*

Month	Production Total	Defect Total	Opportunities	Defect Per Unit	DMPO	Sigma Level
January	130,552	5502	4	0.042144126	10536.03162	3.8
February	134,121	6021	4	0.044892299	11223.07469	3.8
March	115,170	5170	4	0.044890162	11222.54059	3.8
April	135,720	5720	4	0.042145594	10536.39847	3.8
May	130,750	5150	4	0.039388145	9847.036329	3.8
June	116,008	5208	4	0.044893456	11223.36391	3.8
Total	2,325,691	135,781				

Table 4
Defect per million opportunities (DPMO) Original 20m

Month	Production Total	Defect Total	Opportunities	Defect Per Unit	DMPO	Sigma Level
January	153,413	14,053	4	0.091602407	22900.60164	3.5
February	69,945	6,185	4	0.088426621	22106.65523	3.5
March	286,125	24,345	4	0.08508519	21271.29751	3.5
April	263,445	21,085	4	0.080035681	20008.92027	3.6
May	49,038	3,758	4	0.076634447	19158.61169	3.6
June	98,399	5,919	4	0.06015305	15038.26258	3.7
July	99,025	4,445	4	0.044887655	11221.91366	3.8
August	100,754	4,154	4	0.041229132	10307.28309	3.8
September	103,345	4,545	4	0.043978906	10994.7264	3.8
October	99,198	3,998	4	0.040303232	10075.80798	3.8
November	100,850	4,250	4	0.042141795	10535.44869	3.8
December	102,752	3,952	4	0.038461538	9615.384615	3.8
January	99,379	4,279	4	0.043057386	10764.34659	3.8
February	100,721	4,521	4	0.044886369	11221.59232	3.8
March	99,056	4,356	4	0.043975125	10993.7813	3.8
April	101,470	4,370	4	0.043066916	10766.72908	3.8
May	95,249	4,449	4	0.046709152	11677.28795	3.8
June	95,827	4,127	4	0.043067194	10766.7985	3.8
Total	2,117,991	126,791				

Based on DPMO calculation data at PT. “X”, overall it can be seen that the sigma and DPMO levels are 3.68 and 14595.76 for Original 20M products and 3.67 and 14965.95 for Pataya 20M products. Therefore, product quality owned by PT. “X” meets the industry average standard in Indonesia at the level of sigma 2 and 3 (See Table 1).

Analysis

Cause & Effect Diagram or fishbone and Failure Mode and Effect Analysis (FMEA) are used to analyse results.

Based on the Pareto diagram, two types of defects are common: folded and pull early products. The Cause and Effect Diagram analysis indicates the defects.

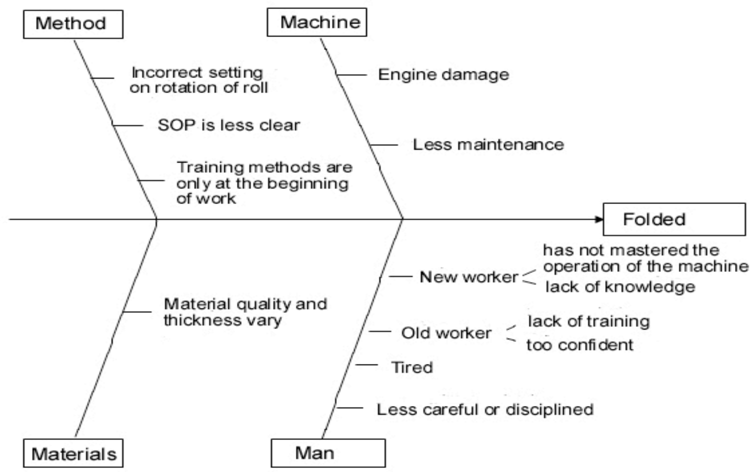

Figure 6. Cause and effect diagram analysis of folded defect

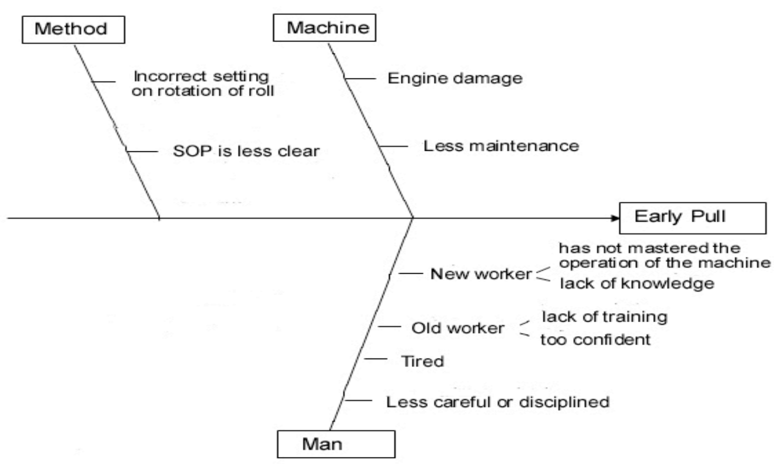

Figure 7. Cause and effect diagram analysis of pull early defect

Based on the analysis of Cause and Effect Diagram, it has been identified the defects are a result of man, material, method, and machine errors.

Furthermore, Failure mode and effects analysis (FMEA) is the stage to identify the causes, check the potential weak points, assess the risks and determine what needs to be addressed first based on the problems experienced by PT. "X".

Table 5
Failure mode and effect (FMEA)

Process	Potential Failure Mode	Potential Failure Effects	S	Potential Causes	O	Current Controls	D	RPN	Actions Recommended
Mixing	Incorrect composition	Product results vary	1	Negligence and lack of knowledge of workers	7	Workers are instructed to follow SPK.	5	35	1. Checking the composition measurement before starting production activities, 2. Improving methods for training workers.
	Lack of quality of raw materials	Product result is defective	7	1. Lack of quality control, 2. Lack of good storage, 3. worker's skill	8	Inspection of raw materials upon arrival at the factory	3	168	1. Improving quality control of raw materials, 2. Adding 15 Minutes of rest time.
	Filtering raw materials are not perfect	Hollow products	6	1. Worker negligence, 2. Filtering machine does not work optimally, 3. Too many and large foreign particles	8	Regular change of machine filter	3	144	1. Improved machine checking before and after production process. 2. Adding the filtering process.
Strainer	Deliberate by worker	1. Slow down the production process, 2. Product Perforated.	8	Lack of workers welfare (less rest period & less holiday)	4	Provide reward and punishment	7	224	1. Increase Compensation and Benefit, Establish good relationships with workers.

Table 5 *(continue)*

Process	Potential Failure Mode	Potential Failure Effects	S	Potential Causes	O	Current Controls	D	RPN	Actions Recommended
	Wrong setting	1. Accumulation and vacuum of material to be processed on strainer, 2.Delay production process, 3. product defect	8	1. Lack of knowledge of workers, 2. worker fatigue due to excessive working hours	7	1. Initial training for 3 months, 2. The existence of SOP, regarding the setting of the machine	7	392	1. Conducting Training every six months, 2. Form a special team to check preparation before production process.
Calendar	Wrong setting	The layer becomes too thin	4	Worker negligence	4	Determining the min. limit of carpet thickness is 2.5ml.	4	64	The team in charge should be given a SPK briefing before starting production
Take Off Unit	Wrong setting	The material becomes disconnected and folded	6	Lack of worker knowledge and negligence	7	Provision of clear SPK, initial training, and the existence of SOP	6	252	1. Perform regular training every 6 months, 2. Form a special team to check the preparation before the production process
Printing/ Emboss Roll	Wrong setting	Colour and image layout are not appropriate	8	Lack of worker knowledge and negligence	7	Provision of clear SPK, initial training, and the existence of SOP	6	336	1. Perform regular every 6 months, 2. Form a special team to check the preparation before the production process
Cooling Roll	Machine damage	Delays the production process due to leakage in the water flow cylinder	6	The existence of a foreign object (Nail)	3	Perform maintenance periodically	3	54	Shorten the 6-month machine-wide checking period

Based on the analysis, the potential weak point is the *Stainer process*, which has setting flaws, with a total RPN (Risk Priority Number) of 392. This error results in the build-up and void of raw materials to be processed on the *strainer*, delays the production process and making defective products. This is due to fatigue among workers which has an impact on the accuracy machine setting done manually in addition to workers' lack of knowledge in this matter.

Improve

Recommendation from the brainstorming session is presented in the Effort Benefit Matrix. Table 6 presents the results of brainstorming session.

Table 6
Brainstorming

No	Solution
1	Training for all workers every 6 months. (Training in machine operation, safety and understanding in reading SPK (Work Order) and IK (Work Instructions)).
2	Conduct additional training, such as leadership training. It is useful for the team leader to be able to lead its members, make decisions, communicate and maintain good relationships.
3	Provide Reward to workers in the form of bonuses if they successfully produce at least 8000 meters/shift (1 shift = 8-10 people), additional holidays, and others. There should be penalty for violation of rules or company policy, to improve discipline of workers.
4	Provide motivation to workers by hosting events, such as lunch, get togethers, Independence Day event or breakfast during Ramadhan.
5	Increase/provide additional rest periods (at least 60 minutes) to minimise fatigue.
6	The company has a special team (2-3 people) to ensure the machine's settings are based on the SPK (Work Order) and IK (Work instructions) specifications before starting the production process.
7	Make SOP (Standard Operating Procedure), IK (Work Instruction) and SPK (Work Order) detailed and easy to understand by other workers so that it can be applied to minimise errors
8	Have a written schedule about work hygiene after production process (machine and environment), such as daily picket schedule.
9	Improve quality control and screening process, in particular ensuring raw materials are checked for its condition upon arrival at the factory. The PVC Powder material for example have to be separated, to prevent there is no contamination of foreign particles.
10	Periodic evaluation and system maintenance or scheduling machine repair for all machines (daily, weekly, monthly and yearly) every 6 months.

Data was analysed using Effort Benefit Matrix:

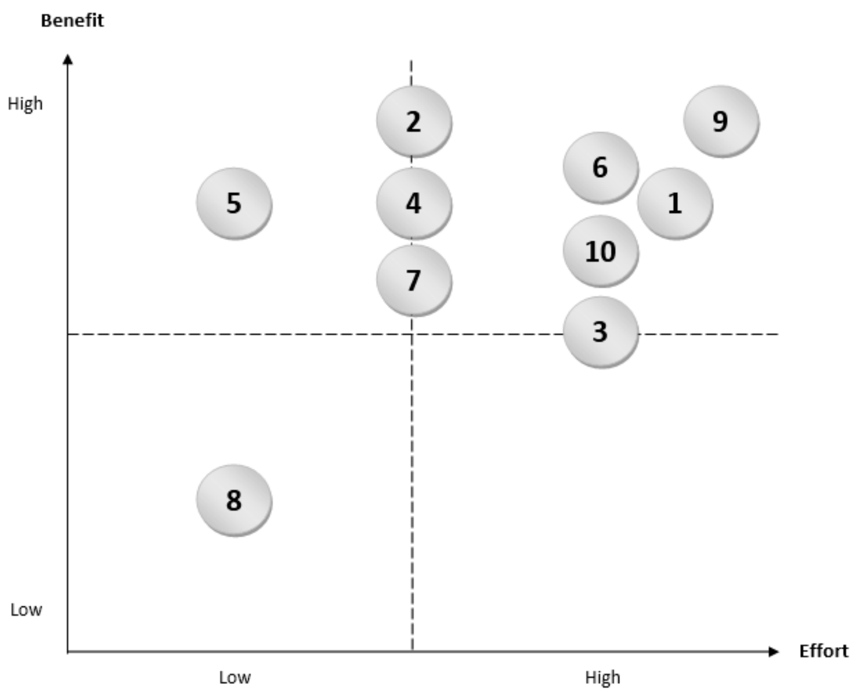

Figure 8. Effort benefit matrix

Based on the results of the Effort Benefit Matrix, point solution 5 is a point that has high profits with a low level of effort; for point number 5, PT. "X" should provide additional time break for workers to reach 60 minutes (one hour). t=The results can answer the third research objective to know the best way to reduce defective products in PT. "X".

Control

In the last stage, we provided recommendation which is found through the previous stage (improve), that is by providing additional or extra worker rest time becoming 60 minutes (one hour). With these recommendations, PT. "X" is expected to improve the quality of the product and furthermore, is expected to prevent similar potential problems in the future.

CONCLUSION

Based on the measurement of product quality level at PT. "X" with Defect per Million Opportunity (DPMO), it can be analysed the level of quality of PVC floor covering are 3.68 and 14595.76 for Original 20M products and 3.67 and 14965.95 for Pataya 20M products. With these results, it can be concluded that the level of product quality owned by PT. "X" is still an average standard.

Factors that cause defective products experienced by PT. "X" include methods, machine, materials, and man. However, the factor of man or worker is the factor that most affected the occurrence of defective products. The main factor causing the defective product on the worker is wrong in the arrangement. It can be analysed from the Risk Priority Number (RPN) value of 392. The recommendation given to overcome this is by the addition of rest time and knowledge of the workers.

The managerial implication of this research is that company should use Six Sigma method of DMAIC method (Define, Measure, Analyse, Improve, and Control) periodically. This is to improve its quality regarding the products and processes, and it can also identify the cause in case of defective products and correct the production error. In addition, the company should also update the policy that addresses the issue of creating employment, providing training and provision of time off.

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Role of Monetary Promotion as a Moderator between Intensity of Distribution Channel and Brand Equity of Hand Sanitiser

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ABSTRACT

This research examines how promotional activities act as a moderator between brand equity and intensity of distribution channel. In this research, sales promotion is the monetary promotion. By using a good sales promotion, the company will know the customer perception of the brand. Previous studies have stated that monetary promotion is a key element in a successful marketing strategy. The management of hypermarkets needs to understand the dynamic of monetary promotion and conceive new ways of organising and executing hypermarket activities that add values to customers. A total of 100 shoppers at a selected hypermarket was used as samples. This study adopted a customer-based approach to address consumer aspects affecting brand awareness, perceived quality, brand association, and brand loyalty. The unit of analysis were Indonesian consumers who are familiar with Antis brand and actively shop at Carrefour's Puri Hypermarket Jakarta, Indonesia. Data was analysed using Structural Equation Modelling-Partial Least Square (PLS-SEM) method. The results showed intensity of distribution channels had a positive significant influence on perceived quality, brand awareness, brand association, and brand loyalty. Monetary promotion did not have any association between intensity of distribution channel and perceived quality, brand awareness, and brand association.

Keywords: Brand equity, intensity of distribution channel, monetary promotion

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INTRODUCTION

Modern society tends to choose instant products, such as hand sanitisers (hand washing product without using water). This product has a quick and direct effect on the consumer and it is practical.

The presence of many different brands of hand sanitisers in the market points to its popularity. One supermarket stores eight hand sanitiser brands with 24 variants which offers the customers a lot of choices. There is stiff competition for marketers of hand sanitisers to affect their market share. The market share of Antis, a brand of hand sanitiser, is very competitive comparison based on its sales quantity and value.

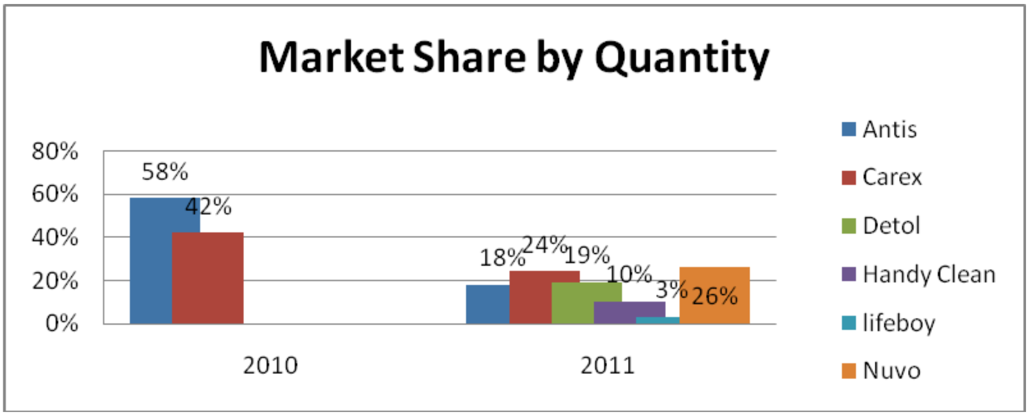

Figure 1. Market share of Antis by quantity in 2010-2011

In 2010, two brands of hand sanitiser were popular in Indonesia - Antis and Carex. Antis had a 58% share of the market. In 2011, many other players entered the market which led to a decrease in Antis's market share to 18%, Carex 24%, Detol 19%, Handy Clean 10%, Lifebuoy 3%, and Nuvo 26%.

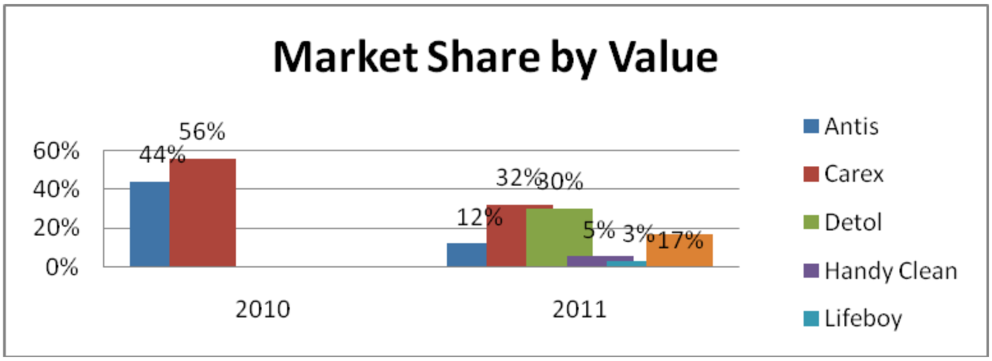

Figure 2. Market share of Antis by in 2010-2011

Companies offer many and frequent sales promotion to compete with the others (Buil, de Chernatony, & Martinez, 2013). In brief, the frequent use of price promotion has a negative impact on quality perception and brand association dimension because this tool causes consumers to think primarily about the price, and not the brand (Yoo Donthu, & Lee, 2000). Martínez and Montaner (2008) stated that monetary promotion has a negative effect on brand image. Karbasi and Rad (2014) stated monetary promotion has a significant impact on brand association, and monetary promotion has a significant positive impact on brand awareness. Despite this, the role of monetary promotion on brand equity remains unclear and scholars highlight the need to examine the contribution of these variables.

Previous studies have shown sales promotions have become a key element towards successful marketing strategy (Singh & Pandey, 2012; Yeshin, 2006). This study examines the influence of Intensity of Distribution channel towards brand equity dimensions also examines the monetary promotion as a moderator between them.

LITERATURE REVIEW

This study is an extension of previous studies which suggested that marketing managers must consider the effect of promotion activity on consumer perception about brand equity. Frequent use of monetary promotion is linked to brand equity (Guizani, & Merunka, 2011; Joseph & Sivakumaran, 2009; Palazón-Vidal & Delgado-Ballester, 2005; Yoo et al., 2000). This study also refers to previous research that channel performance contributes to brand equity (Kim & Hyun, 2011). According to Londoño, Elms and Davies (2016), brand retailer channel can strengthen or weaken the performance of both product brand and the retailer. According to Rosenbloom (2012), the role of retailer in the distribution channel is to interpret the demands of his customers and to find and stock the goods these customers *want*. Image from the store not only attracts attention, interest and contact from potential consumer but also it increases customer satisfaction. The intensity of distribution also has positive impact on brand equity dimension because the high intensity of distribution increases the opportunity for the customer to buy the product, whenever and wherever the consumer wants it (Kim & Hyun, 2011). Sales promotion supported sales increase (Belch & Belch, 2004; Buil et al., 2013). The objective of this paper is to contribute to literature by evaluating the role of monetary promotion as moderator between intensity of distribution channel and brand awareness, intensity of distribution channel and perceived quality, intensity of distribution channel and intensity of distribution channel and brand association.

Channel

Marketing channel is involves ensuring products or services are available for use or consumption. Distribution channels include distributors, wholesalers, retailers, and agents (Kotler & Keller, 2009). Marketers use distribution channels to show, sell, or deliver physical products or services to customers or consumer. Channel strategy includes the design and management of intermediaries such as wholesalers, distributors, brokers and retailers (Keller, 2013). The purpose of channel is to communicate marketing activities (Londoño et al., 2016). A distribution channel can create channel equity through the net present value (Sullivan & Thomas, 2004). A retail channel can be a brand differentiation (Rastogi & Sharma, 2015).

Monetary Promotion

Most research examining the role of advertising and sales promotion in brand equity creation on sales promotion focuses on monetary promotion such as discount and coupon. Monetary promotion may have different effect on profitability and brand equity (Srinivasan & Anderson, 1998). Moreover, focusing on direct effects on dimension of brand equity, monetary promotion tends to have negative impact on quality perception and brand association. Therefore, many firms have not used monetary promotion as a strategy. Saeed, Ahmed and Mukhtar (2001); Kamarohim, Bojei, Muhammad and Othman (2016) report that distribution channel should create value by product and distribution strategies while relying less on promotional & pricing strategies. Consumers often use price as indicating quality of the product (Agarwal & Teas, 2002; Delvecchio, Henard, & Freling, 2006; Jørgensen, Taboubi, & Zaccour, 2003).

Brand Awareness

Aaker (2009) stated brand awareness is the ability of a potential buyer to recognise or remember that a brand is a member of some product categories. According to Salamandic, Alijosiene and Gudonaviciene (2014), brand awareness is associated with price sensitivity. Keller (2013) stated channel influences brand awareness on the purchase in which their behaviour showed and promoted a brand.

Perceived Quality

Perceived quality can be defined as customer perception on overall quality or excellence of products or services that meets their expectation (Aaker, 2009). According to Severi and Ling (2013), perceived quality is defined as overall customer's perception about the intelligence and quality of product and service. Maintaining product quality while reducing prices (Porter & Helm, 2008) is the key. Yoon, Oh, Song, Kim and Kim (2014) pointed to the case in IKEA where new prices were lowered but quality had been maintained. Erenkol and Duygun (2010) stated that quality of product is different from perceived quality as the latter is subjective assessment. A retail shopper considering a purchase is likely to calculate that value based on the price (Yoon et al, 2014). Zeithaml (1988) confirmed that perceived quality determines customer's choices.

Brand Association

According to Aaker (2009), an association related to some brands is typically associated with memory. A stronger brand association will be based on experiences. Moreover, brand association is information that is connected to brand knots in memory, which creates a brand meaning for the customer based on strength, and uniqueness of brand which is a source that creates the response of different consumers, and generate brand equity (Kumar, 2007).

Brand Loyalty

According to Aaker (2009), brand loyalty is the core of brand equity. It is related to the customer's connection with a brand. Moreover, brand loyalty measures customer's attachment to the brand. According to Pride, Ferrel, Lukas, Schembri, Niininen and Casidy (2012), brand loyalty is the attitude that is beneficial for customers. If the loyalty is strong, the customer will continue to buy the brand. Oliver (1999) stated that affective loyalty is an accumulation of a customer's favourable experiences that can generate attitudinal orientation towards the brand.

MATERIALS AND METHODS

An associative analysis method was employed in this study. This method will point out the relationship between variables and dependence level of each variable, either an independent variable, a dependent variable, or a moderating variable. The unit analysis of this study is Indonesian consumers who are familiar with Antis brand and who actively shop at Carrefour's Puri Hypermarket Jakarta - Indonesia. The biggest hypermarkets in Indonesia are found in the areas of Jabodetabek (Jakarta, Bogor, Depok, Tangerang, and Bekasi) – with Carrefour as the biggest with 42 outlets. Carrefour in Puri Hypermart Jakarta was selected as a research target questionnaires because it sells more than 5 brands of hand sanitisers but the focus is on the Antis's Brand. Data was collected using questionnaires. The questionnaire was divided into two parts: the first part contained demographic information while the second part had statements, with a choice of answers in the form of nominal scale and the responses in relation to the variables in the study. Consumers' responses to each variable of the study were measured using 5- point Likert scale with 1; indicating "Strongly Agree", while the rest "Agree", "Neutral", "Disagree" and "Strongly Disagree".

Data was analysed using SEM-PLS method. It is a causal modelling approach that aims to maximise the variance of criterion latent variables (latent variables hypothesised as the outcome of other variables) that can be explained (explained variance) by predictor latent variables (latent variables hypothesised as a determinant of other latent variables). The SEM-PLS can work efficiently with small sample sizes and complex models.

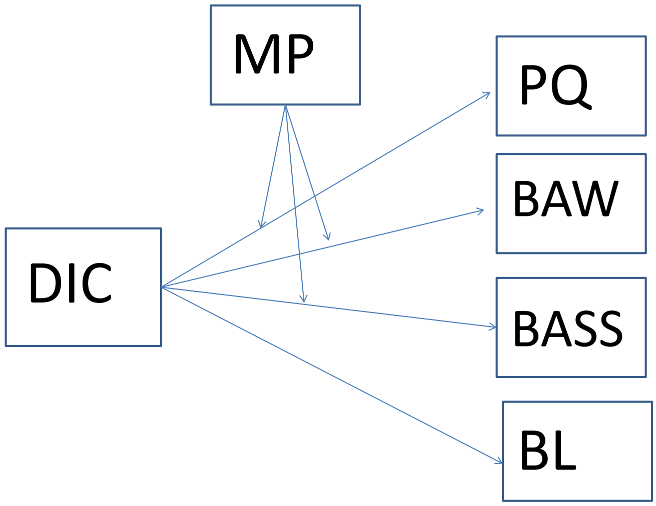

Figure 3. Framework

Variables:

DIC : Intensity of Distribution Channel
MP : Monetary Promotion
PQ : Perceived Quality
BAW : Brand Awareness
BASS : Brand Association
BL : Brand Loyalty

RESULTS AND DISCUSSIONS

Bases for decision making:

$T_{statustic} \geq T_{value}$, then Ho is rejected, Ha is accepted

$T_{statustic} < T_{value}$, then Ho is accepted, Ha is rejected

The research participants were customers who buy "Antis" product in Puri Hypermart Carrefour, West Jakarta. One hundred respondents were recruited via random sampling technique and data from questionnaire was analysed using structural equation modelling supported by SMART-PLS 3.0 applications. Data showed the majority of customers who buy Antis is between the ages of 21 and 30 years and are employed.

Table 1
Respondent's profile

No.	Statement	Criteria	Percentage
1.	Sex	Female	71%
2.	Age	21- 25	35%
		26 - 30	20%
3.	Occupation	Staff/employee	51%

On the basis of decision-making $T_{statustic} \geq T_{value}$, Ho is rejected and Ha is accepted. Meanwhile, $T_{statustic} < T_{value}$, which means Ho is accepted and Ha is rejected T_{value} : 1.96

Table 2
Output of total effect

	Original Sample (O)	Sample Mean (M)	Standard Error (STERR)	T Statistics (|O/ STERR|)	P Values
(1) PQ Interaction Effect: MP (Two Stage) -> DIC -> PQ	0,132	0,090	0,122	1,082	0,280
(2) BAW Interaction Effect: MP (Two Stage) -> DIC -> BAW	0,095	0,056	0,104	0,913	0,362
(3) BASS Interaction Effect: MP (Two Stage) -> DIC -> BASS	0,050	0,022	0,110	0,450	0,653
DIC -> BASS	0,527	0,542	0,068	7,742	0,000
DIC -> BAW	0,465	0,470	0,090	5,142	0,000
DIC -> BL	0,453	0,466	0,083	5,436	0,000
DIC -> PQ	0,495	0,501	0,077	6,425	0,000
MP -> BASS	-0,117	-0,099	0,154	0,761	0,447
MP -> BAW	-0,266	-0,243	0,136	1,959	0,051
MP -> PQ	-0,107	-0,107	0,103	1,043	0,298

Intensity of Distribution Channel on Brand Awareness

The result of hypothesis testing showed the intensity of distribution channel has significant influence on brand awareness. This result proves that by distributing Antis to several stores and placing the products in a strategic location, consumers will be able to access the product due to increased awareness. This finding is in line with Kim and Hyun (2011) where channel performance positively influences brand awareness.

Intensity of Distribution Channel on Perceived Quality

The result of hypothesis testing showed intensity of distribution channel has significant influence on perceived quality. It is especially true with regards to the role of intensity of distribution channel that has an impact on consumer confidence in Antis. These findings are in line with Kim and Hyun (2011) who found channel performance has positive influence on perceived quality.

Intensity of Distribution Channel on Brand Association

The result of hypothesis testing showed intensity of distribution channel has a significant influence on brand association. This finding is line with Kim and Hyun (2011) who showed channel performance affects brand association as in the case of Antis. In addition, survey results most respondents favoured the Antis product as they found it interesting. Kim and Hyun (2011) reported that a good store image not only attracts attention, interest, and relation between potential customers, but also increases their satisfaction and create positive word of mouth. Hence, it can increase brand awareness, brand association, and brand loyalty.

Intensity of Distribution Channel on Brand Loyalty

The result of hypothesis testing showed intensity of distribution channel has significant influence on brand loyalty. This is in line with Kim and Hyun (2011), who observed a positive impact between channel's performance and brand awareness, brand association and brand loyalty. Aaker (2009) found strong brand equity can increase sales because they are able to create a distribution loyalty channel. With strong brand equity, distribution channel can be developed so there will be many stores which in the end will increase sales volume.

Monetary Promotion on Brand Awareness

The result of hypothesis testing showed monetary promotion has no significant influence on brand awareness. This is in contrast to the findings of Karbasi and Rad (2014) who pointed out that monetary promotion has significant influence on brand awareness.

In this research, Antis was chosen as a producer of premium brand hand sanitiser. It was the first in Indonesia's market and therefore, discounts do not change consumer's awareness or loyalty to it. In short, consumers will remain aware and conscious of Antis existence.

Monetary Promotion on Perceived Quality

The results of hypothesis testing showed monetary promotion has no significant influence on perceived quality. This finding is in contrast to that of Karbasi and Rad (2014) that monetary promotion influences perceived quality. Buil et al. (2013) however, noted a negative association between monetary promotion and perceived quality.

Consumers believe the quality of Antis product is not affected by the discounts offered. Therefore, consumers who buy Antis are not doing so because of sales promotion in the past or present. The sale prices do not reduce the quality of product as well as proves consumer loyalty.

Monetary Promotion on Brand Association

The results of hypothesis testing showed monetary promotion has no significant influence on brand association. Karbasi and Rad (2014) however, found monetary promotion has positive and significant influence on brand association. The findings of the current research are supported by Buil et al. (2013) who said that monetary promotion is not significantly associated with brand association. In contrast, brand association is influenced by consumer's perceived quality. Hence, brand association of Antis is not affected by discount because the latter can only affect sales quantity.

Table 3
Test results of moderation hypothesis

No	Hypothesis	Result
1	Monetary promotion moderates the relation between variable of intensity of distribution channel and brand awareness	Not significant
2	Monetary promotion moderates the relation between variable of intensity of distribution channel and perceived quality	Not significant
3	Monetary promotion moderates the relation between variable of intensity of distribution channel and brand association	Not significant

The interaction between intensity of distribution channel and monetary promotion does not affect dimensions of brand equity, such as brand awareness, perceived quality, and brand association. This proves that the interaction between intensity of distribution channel and monetary promotion does not strengthen each dimension of brand equity. Moreover, this research proves that discount prices support intensity of distribution channel unable to reduce or increase the value of a brand.

According to Buil et al. (2013), it is difficult to assess impact of monetary promotion on building a long-term relation of brand association and create uncertainty of product quality where the result will create negative perceptions of a product. Yoo et al. (2000) stated that frequency of using price promotion has negative influence on perceived quality and brand association because the former will lead the consumer to focus on price rather than the brand.

CONCLUSION

Based on the results and discussion on analysis of intensity of distribution channel on brand equity with monetary promotion as moderator variable on Antis product, the following can be concluded:

a) Intensity of Distribution channel has significant influence on brand awareness.
b) Intensity of Distribution channel has significant influence on perceived quality.
c) Intensity of Distribution channel has significant influence on brand association.
d) Intensity of Distribution channel has significant influence on brand loyalty.
e) Monetary promotion is not significant to brand awareness.
f) Monetary promotion is not significant to perceived quality.
g) Monetary promotion is not significant to brand association.
h) Interaction of Intensity of Distribution channel and monetary promotion is not significant to brand awareness, perceived quality, and brand association.
i) Monetary promotion does not moderate between intensity of distribution channel and brand awareness.

j) Monetary promotion does not moderate between Intensity of Distribution channel and perceived quality.

k) Monetary promotion does not moderate between Intensity of Distribution channel and brand association.

Based on the analysis of Intensity of Distribution channel on brand equity with monetary promotion as moderator variable on Antis product there are some suggestions for a further research. Sales and discounts can only stimulate short-term sales. Therefore, other strategies that offer a long term profitability should be considered, such as private events, TV advertisement, event sponsorships, and more attractive product packaging. In order to increase perceived quality of Antis, the company can provide testers in distribution channel.

LIMITATION AND FUTURE RESEARCH DIRECTION

This study has shown the link between consumer behaviour and Brand awareness, brand association, perceived quality and brand loyalty. It proposes a future research direction by adding contextual effects of intensity of distribution channel to brand awareness, brand association and perceived quality with monetary promotion as a moderator in different hypermarkets and different area. Future research can also study the dynamic effect of intensity of distribution channel using a multi-level design utilitarian and hedonic purchasing. Specifically, it can investigate the relationship between intensity of distribution channel and non-monetary promotion based on the current research model.

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Knowledge Sharing Activities among Lecturers and its Impact on their Performance in Binus University: A Case Study of Lecturers of School of Business Management

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ABSTRACT

The purpose of this study is to identify factors that drive knowledge sharing among lecturers in conducting research that can support faculty performance, and examine the effect of knowledge sharing and its impact on the performance of lecturers. A cluster random sampling method was used to recruit 106 out of 164 lecturers in the School of Business Management as respondents for this study. Structural Equation Modeling (SEM) with WarpPLS Software 4.0 is used for data analysis. The most influential factor is knowledge sharing motivator. Knowledge sharing had the positive and significant effect on the performance of lecturers. It means that lecturers already conduct knowledge sharing to improve their research quality.

Keywords: Knowledge sharing, lecturer, performance

INTRODUCTION

Higher education institutions strengthen the nation's competitiveness through a new paradigm that focuses on quality, access, equity, as well as autonomy. The focus is on improving regional competitiveness (2015-2020) and international competitiveness (2020-2025). From this perspective, the benchmarks of educational power are no longer determined by national standards, but more than that, is the ability of graduates to develop and fill regional and international employment opportunities. Lecturers are required to implement Three Principles (Tri Dharma) of Higher Education. Besides teaching, lecturers should expand and

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develop their knowledge through research. According to Permenpan and RB No.17 in 2013, a lecturer should be more active in conducting research. Research accounts for 25% - 45% of the lecturer's workload. Data shows a lack of publication of scientific papers. A 2012 data from DIKTI 2,777 publications by lecturers from Public Higher Education and only 429 publications by lecturers from Private Higher Education.

The differences of knowledge among individuals should be reduced to maximise efficiency. So, knowledge sharing among managers of higher education becomes very important to improve the human ability to think logically which will generate innovation. Thus, innovation is a process of ideas through research and development to produce a prototype that could be commercialised. The development of Binus University to attain World Class University standard means it must adapt to environmental demands. This is a reflection of acceleration of changes made possible using information and communication technology.

The purpose of this study is to identify the factors of knowledge sharing among lecturers in conducting research that can support faculty performance and examine the effect of knowledge sharing and its impact on lecturers' performance.

LITERATURE REVIEW

Rašula, Bosilj Vu kš and Indihar Štemberger (2012) found the positive influence of Knowledge Management (KM) on organisational performance, which is the starting point for managers to apply it to the organisation. The KM applications include business process restructuring initiative, development of human capital, knowledge mapping, introduction of teams, cross-functional work, increased emphasis on collaboration, and use of formal channels for sharing knowledge. Boediprasetya et al. (2012) stated Institutions of Higher Learning is an organisation based on knowledge (knowledge-based organisation). Recent research showed organisations, especially those with knowledge-based, receive great benefit by implementing KM. The critical stage of successful implementation of KM is knowledge sharing, and it is indispensable (Susanty, Salwa, Chandradini, Evanisa, & Iriani, 2016). Knowledge sharing activities in higher educational institutes occur among the lecturers in order to implement the Three Principles (Tri Dharma) of higher education, particularly in research areas. However, research output is still low, at least based on the number of research publications produced by lecturer. It may be caused by the less effective knowledge sharing. There are three types of KM, namely knowledge transfer, knowledge sharing, and knowledge barrier. Knowledge sharing and knowledge transfer are defined in two ways, which depend on the perspective of the use of knowledge. Researchers that viewed knowledge as an object tend to use the term 'knowledge transfer' (Paulin & Suneson, 2012). Others that view knowledge as a process tend to use the term 'knowledge sharing.' Sharing knowledge is considered as an important process in knowledge management. Pradana (2012) said that to overcome internal and external barriers to knowledge sharing motivating factors are required, namely Internal Incentives likereward, and External Incentives, such as attention and cooperation among employees by familiarising them with the work environment.

Higher education institutions are not automatically able to apply KM as the academics are not aware of its the importance to improve the quality of its implementation (Prabowo, 2010). With improved quality, higher education gets a great benefit, especially to improve its performance and its ability to compete. In implementing knowledge management, the change of mindset is needed, especially among lecturers who are the main actors of KM.

MATERIALS AND METHODS

This is an exploratory and descriptive-associative research and a cross-sectional study that sampled 106 lecturers at School of Business Management (SOBM). This is a time horizon study that can be done with data collected only once, which is daily, weekly or monthly (Sekaran, 2007). A random sampling technique was used to recruit the respondents and data was analysed using Structural Equation Modelling (SEM).

RESULTS AND DISCUSSIONS

Measurement Model Assessment (Outer Model) Constructs Knowledge Sharing

Table 1
Calculation results loading factor knowledge sharing variable

Indicator	Factor Loading	SE	P Value	Significance
		Knowledge activity		
KsAc1	0,413	0.075	<0.001	Significant
KsAc2	0,522	0.075	<0.001	Significant
KsAc3	0,753	0.075	<0.001	Significant
KsAc4	0,584	0.075	<0.001	Significant
KsAc5	0,547	0.075	<0.001	Significant
KsAc6	0,569	0.075	<0.001	Significant
KsAc7	0,272	0.075	<0.001	Significant
KsAc8	0,555	0.075	<0.001	Significant
KsAc9	0,570	0.075	<0.001	Significant
KsAc10	0,081	0.075	<0.141	Significant
KsAc11	0,431	0.075	<0.001	Significant

Table 1 *(continue)*

Indicator	Factor Loading	SE	P Value	Significance
Knowledge sharing technologies				
KsT1	0,638	0.075	<0.001	Significant
KsT2	0,834	0.075	<0.001	Significant
KsT3	0,666	0.075	<0.001	Significant
General Attitude towards Knowledge sharing				
KsAt1	0,508	0.075	<0.001	Significant
KsAt2	0,403	0.075	<0.001	Significant
KsAt3	0,574	0.075	<0.001	Significant
KsAt4	0,636	0.075	<0.001	Significant
KsAt5	0,26	0.075	<0.001	Significant
KsAt6	0,251	0.075	<0.001	Significant
KsAt7	(0,018)	0.075	<0.406	Significant
KsAt8	(0,01)	0.075	<0.445	Significant
KsAt9	0,593	0.075	<0.001	Significant
KsAt10	0,611	0.075	<0.001	Significant
KsAt11	0,255	0.075	<0.001	Significant
KsAt12	0,06	0.075	<0.001	Significant
Knowledge sharing motivators				
KsM1	0,654	0.075	<0.001	Significant
KsM2	0,752	0.075	<0.001	Significant
KsM3	0,802	0.075	<0.001	Significant
KsM4	0,747	0.075	<0.001	Significant
KsM5	0,272	0.075	<0.001	Significant
KsM6	0,399	0.075	<0.001	Significant

Notes: KsAc - Knowledge Sharing Activities, KsT - Knowledge Sharing Technologies, KsAt - *General Attitude towards Knowledge sharing*, KsM - Knowledge Sharing Motivators

The biggest loading factor of knowledge sharing activity at 0.753 is sharing the results of the seminar/workshop. Knowledge sharing technologies at loading factor of 0.834 provide valuable information to work and last, general attitude towards knowledge sharing is that sharing helps each other with loading factor of 0.636. Knowledge sharing motivator is a reciprocal with loading factor of 0.802. This result shows dimensions of knowledge sharing technologies are the most important in describing its construct.

Measurement Model Assessment (Outer Model) Constructs Lecturer Performance

Table 2
Calculation of loading factor on lecturer's performance

Indicator	Factor Loading	SE	P Value	Significance
		Knowledge (Subject Knowledge)		
Ksk1	0,294	0.075	<0.001	Significant
Ksk2	0,346	0.075	<0.001	Significant
Ksk3	0,644	0.075	<0.001	Significant
Ksk4	0,651	0.075	<0.001	Significant
Ksk5	0,759	0.075	<0.001	Significant
Ksk6	0,698	0.075	<0.001	Significant
Ksk7	0,495	0.075	<0.001	Significant
		Testing (Assessment Procedures)		
Tap1	0,311	0.075	<0.001	Significant
Tap2	0,493	0.075	<0.001	Significant
Tap3	0,717	0.075	<0.001	Significant
Tap4	0,79	0.075	<0.001	Significant
Tap5	0,718	0.075	<0.001	Significant
Tap6	0,657	0.075	<0.001	Significant
		Student-Teacher Relations		
Str1	0,805	0.075	<0.001	Significant
Str2	0,805	0.075	<0.001	Significant
		Organisational Skills		
OS1	0,441	0.075	<0.001	Significant
OS2	0,725	0.075	<0.001	Significant
OS3	0,754	0.075	<0.001	Significant
OS4	0,6	0.075	<0.001	Significant
OS5	0,684	0.075	<0.001	Significant
		Communications Skills		
CS1	0,864	0.075	<0.001	Significant
CS2	0,864	0.075	<0.001	Significant
		Subject Relevance		
SR1	0,788	0.075	<0.001	Significant
SR2	0,814	0.075	<0.001	Significant
SR3	0,522	0.075	<0.001	Significant
		Utility of Assignments		
UoA1	0,839	0.075	<0.001	Significant
UoA2	0,839	0.075	<0.001	Significant

Notes: Ksk - Knowledge (Subject Knowledge), Tap - Testing (Assessment Procedures), Str - Student-Teacher Relations, OS - Organisational Skills, CS - Communications Skills, SR - Subject Relevance, UoA - Utility of Assignments

Among seven dimensions that formed the construct of lecturer performance, the dimensions that have the biggest loading factor of communications skills are building a good learning environment and courteous and facilitate communication and clear information in concepts and attitudes with each loading factor of 0.864. Subject relevance is the question related to learning modules that have been approved with the loading factor of 0.814. This means that the dimension of the communications skills is the most capable to describe the construct of lecturer performance. Full SEM model results indicated a significant p value for all the variables observed and latent variables. Dimension sharing motivator parameter estimation at 0.824 are the greatest parameter estimation among other dimension to the value of R square 0.680. This means that the knowledge sharing in the assessment of the respondent will be successful if sharing motivator is the reference.

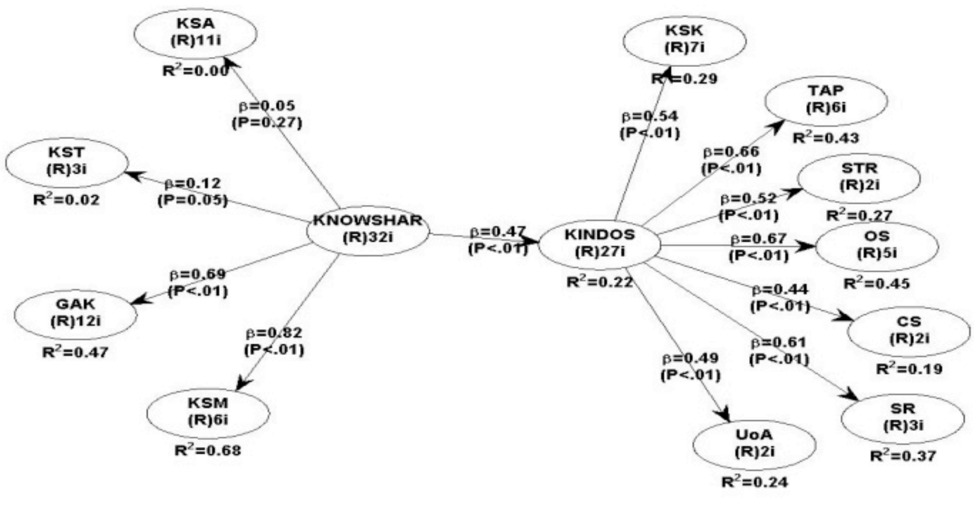

Figure 1. Full model of SEM

Knowledge sharing will be successful if there is high motivation to do research. While knowledge sharing activities have the smallest parameter estimation with R square 0,002, organisational skills dimensio has 0.668 parameter estimation which the greatest parameter estimation among other dimension with the value of R square 0.446. Knowledge sharing has positive and significant effect on the performance of lecturers. It has an estimated parameter of 0.47 in relation to the performance of the lecturers. The determinant coefficient of 0.22 means that the variables of lecturer performance can be explained by the variable knowledge sharing by 77.91%, while the rest is explained by other factors not studied here. Statistical test results indicate the views from the highest of the variable forming knowledge sharing is the sub variable knowledge sharing motivators, the need for motivation in doing research that affect the performance of lecturers.

Managerial Implementation

As stated in Law No. 14/2005, lecturers are professional educators and their main task is to transform, develop, and disseminate knowledge, technology and arts through education, research, and service. As a professional, a lecturer's performance needs to be periodically assessed and appraised. The existence of knowledge management is to answer the question which is the process of converting tacit knowledge into knowledge that is easily communicated and easily documented. The result is called explicit knowledge. The core of successful knowledge management application is knowledge sharing. Knowledge sharing, whether spontaneous, structured, or unstructured, is extremely vital to the success of company. Moreover, knowledge sharing is only possible if each member has an opportunity to express their opinions, ideas, criticisms, and comments to other members in the organisation. Knowledge sharing will bring new ideas and which contributes to creativity and a critical minded scholar (Lin, 2007).

Effort or willingness is an attempt that can be measured by the willingness in doing something. Motivation to learn from one another, the motivation to help others as the reciprocity and self-satisfaction and to get an award or recognition showed the overview of ability (Boediprasetya et al., 2012). The process of knowledge sharing is also knowledge exchange and cooperation between individuals in creating new knowledge to create synergies between individuals in achieving organisational goals (Van Den Hooff & de Ridder, 2004). Each individual's knowledge contains values that may imply their status, power, and awards. Award or reward motivates individual for knowledge sharing. A person will be motivated to share knowledge if the knowledge sharing can improve their reputation and if a person does the right things for the organisation they will get a reward. The reward is not only in the form of compliment that can boost individual morale but there is tangible reward as well.

According to Lucas and Ogilvie (2006), intrinsic motivation has two significant roles in the process of knowledge transfer. First, intrinsic motivation for personal reward and second, intrinsic motivation pushes the individual to share knowledge.

CONCLUSION

Knowledge sharing activities, knowledge sharing technologies, general attitude towards knowledge sharing, and knowledge sharing motivators are crucial for the performance of lecturers. The most influential factor is knowledge sharing motivator. Therefore, knowledge sharing has a positive and significant effect on the lecturers' performance.

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APPENDIX

QUESTIONNAIRE

General Information

1. Gender
    a. Male   b. Female
2. How long have you been working in Binus University?
    a. < 5 years
    b. 5 – 10 years
    c. 11 – 20 years
    d. > 21 years
3. Designation
    a. Instructor   c. Associate Professor
    b. Assistant Professor   d. Professor
4. Employment status
    a. AFM
    b. FM (SCC, SCS, Structural)

Mark (X) or circle every statement below with assessment:

5 = Strongly Agree

4 = Agree

3 = Not Sure

2 = Disagree

1 = Strongly Disagree

Knowledge Sharing Variable							
Dimension	No	Statement	Respondent Assessment				
			5	4	3	2	1
Knowledge sharing activities	1	Publishing books, journals, or other academic materials					
	2	Sharing articles in books, journals or magazines					
	3	Sharing of experience in seminars, workshops					
	4	Attending /participating in Web/Video Conferences					
	5	Discussing projects with peers within and/or outside organisation					
	6	Presenting at symposiums, Public lectures and conferences					
	7	Attending training program					
	8	Attending/ participating in symposiums and Public lectures					
	9	Sharing research findings					
	10	Attending /participating in meetings in (university / faculty					
	11	Participating in others events for example competition					
Knowledge sharing technologies	1	Work related information and knowledge are stored, classified and updated in a scientific and regular manner					
	2	The organisation's IT system provides valuable and useful information/data for my work					
	3	The organisation's IT system facilitates the sharing of knowledge and information among members					
General Attitude towards knowledge sharing	1	I feel that it is important to share knowledge with other academics for the benefit of all					
	2	Academics should share knowledge with their peers only when approached					
	3	Academics should voluntarily share their knowledge with peers					
	4	I feel that ‘‘sharing is caring’’					
	5	It is better to avoid sharing information with peers whenever possible					
	6	I am willing to share information with my colleagues					
	7	My colleagues are willing to share information with me					
	8	My colleagues are willing to share their lecture notes, power point slides and other resources with me					
	9	Knowledge management implementation will not make any positive changes in the company					

Knowledge Sharing Variable							
Dimension	No	Statement	Respondent Assessment				
			5	4	3	2	1
	10	Sharing knowledge reduces competitiveness among peers					
	11	Knowledge sharing is time consuming					
	12	Knowledge sharing seems to be an additional responsibility					
Knowledge sharing motivators	1	To learn from each other					
	2	To help others					
	3	As an exchange or feedback					
	4	Self-satisfaction					
	5	To obtain reward or recognition					
	6	To cultivate image of expertise					
The Performance of Lecturer							
Dimension	No	Statement	Respondent Assessment				
			5	4	3	2	1
Knowledge (subject knowledge)	1	Declare knowledge from facts and concepts					
	2	Knowledge give procedures					
	3	Motivating efforts and consistency in moving forward					
	4	Content of knowledge					
	5	Ability to coordinate, integrate, organise, and adaption of concepts					
	6	Drive good thinking into teaching					
	7	Deep knowledge is get from election and application of knowledge					
Testing (Assessment procedures)	1	Formulate and develop test materials					
	2	Prepare learning objectives					
	3	Develop syllabus					
	4	Prepare handouts and other additional materials					
	5	Using a variety of media or technology to learn, to clarify and generate student interest in learning					
	6	Organise learning and presentation					
Student-teacher relations	1	Promotion of student participation					
	2	Activity of participation in the class					
Organisational skills	1	Bureaucracy ability to well conduct and well organise the class					
	2	Sufficient number of assignments and tests					
	3	Manage the time of study					
	4	Manage and coordinate guest speaker					

The Performance of Lecturer							
Dimension	No	Statement	Respondent Assessment				
			5	4	3	2	1
	5	Creating facilities for the implementation of a class discussion and student learning activities					
Communications skills	1	Information must be clearly communicated					
	2	Have a good and respectful learning environment					
Subject relevance	1	Fair and appropriate evaluation methods					
	2	Questions match to approved learning module					
	3	Books and other learning material are recommended by teachers					
Utility of assignments	1	Assignments contribute to learning outcome					
	2	Assignments must be interesting and challenging to students					

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Promoting Health and Brand Awareness - An Overview of Integrated Gamification Approach on Corporate Sector

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ABSTRACT

This paper is an overview of how an internal engagement program - supported by effective gamification approach - can motivate an employee to take an active role in health promotion and at the same time create positive brand awareness. The method used was a series of challenges with each challenge designed to convey a particular message and objective to promote a healthy environment. Results showed that this approach attracted the participation of 181 (90%) branch offices with 69 branch offices (38%) participated in all challenges. A total of 2,530 tweets produced more than 15 million impressions in the social media platform. A new perspective from the organisation in using social media to promote the brand and internal activities started to develop. In conclusion, gamification can be used to optimise a corporate employee engagement program not only to achieve its internal objective but also to push for an active health promotion program for the community. These activities can boost positive brand awareness.

Keywords: Brand awareness, employee, health promotion, internal engagement program, gamification, social media

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INTRODUCTION

The Fourth International Conference on Health Promotion in 1997 developed the Jakarta Declaration that sets out the direction of health promotion in the 21st century (WHO, 1997) for Indonesia. The importance of multi sectoral cooperation and partnerships in addressing public health challenges has been proven effective. Workplace, along with schools, hospitals, city, and other places have become priority settings for health promotion into the 21st century (Chu et al., 2000; WHO, 2016). The workplace affect physical, mental, social and economic well-being of workers. It is an ideal setting to support the promotion of health for a broader audience (Chu et al., 2000; WHO, 2016).

Improving worker's knowledge and skills to manage their health and the environment will be conducive to health not only within but also outside the workplace. It benefits not only the workers but also their families. The health-promoting workplace especially one that is concerned about the environment will bring positive changes which support the overall success of an organisation (Chu et al., 2000). Nowadays, an environmentally more responsible company increases their value in the eye of the public that enhances positive image for their brand (Nielsen, 2014).

Several methods have been established to promote health in different settings. McLeroy argued that those methods were based on interpersonal factors, such as knowledge and attitude; interpersonal process such as social network support; institutional factors; community factors; and public policy (McLeroy, Bebeau, Steckler, & Glanz, 1998). In order to effectively engage workers in promoting health, an appropriate approach needs to be established.

This paper focuses on POS BERGERAK, an internal engagement and social responsibility program implemented by PT. POS INDONESIA. It discusses how an internal engagement program, supported by effective gamification approach, can motivate the employee to take an active role in health promotion (using social media) and at the same time, create positive brand awareness.

LITERATURE REVIEW

Health Promotion is important to engage communities to be responsible for their health. It includes a variety of activities are undertaken, from encouraging mothers to do a routine pregnancy check up to building proper toilets, from educating school children to properly brush their teeth to engaging home industry workers to observe proper ergonomic positions (World Economic Forum, 2015). Teaching students to wash their hands properly, prevention of dengue using a simple calendar, encouraging people to stop smoking are some of the other health promotion programs (Hirai et al., 2016; Respati et al., 2016a; Respati, Piliang, Nurhayati, Yulianto, & Feriandi, 2016b). All programs involve individuals, community, and institution to be able to take care of their health (Buttenheim et al., 2014).

A healthy, qualified and motivated workforce is paramount for the future success of any company. The concept of the health promoting workplace (HPW) was introduced and campaigned by WHO since several decades ago. (WHO, 2016) It is becoming increasingly relevant as more private and public organisations recognise that HPW ensures not only a flexible and dynamic balance between customer expectations and organisational targets but also employees' skills and health needs. The development of HPW will be a pre-requisite for sustainable social and economic development for nations. As stated above, the priority settings for health promotion into the 21st century are the workplace, along with the school, hospital, city, island, and marketplace. (WHO, 2016) The physical, mental, economic and social well-being of workers are directly influenced by the workplace. It will, in turn, influence the health of their families, communities, and society. It is an ideal setting and ideal infrastructure for a large audience to support promotion of health. The health of workers is also affected by non-work-related factors such as the environment they were living in.

At present, Indonesia, has a population of 250 million people and complex environmental health problems, such as waste (WMO, 2013). A 2015 Ministry of Environment and Forestry survey found that household waste generated nationwide has increased to 175,000 tons each day or around 64 million tons per year (Ministry of Environment and Forestry, 2015). Official ministry data found 68 million tons of garbage would be produced in 2019 which is 14 per cent or around 9.52 tons of plastic garbage.

Jenna Jambeck from the University of Georgia (Jambeck et al., 2015) calculated 275 million metric tons (MT) of plastic waste was generated in 192 coastal countries in 2010, with 4.8 to 12.7 million MT entering the ocean. The quality of waste management systems together with population size determines which countries contribute the greatest waste. Good waste management infrastructure improvement will ensure decrease in the cumulative quantity of plastic waste available to enter the ocean from land. Without good waste management, it is predicted waste, especially plastic, will increase drastically by 2025.

Improper management of waste disposal will cause not only pollution of air, soil, and water; it will also become best breeding places for agents and vectors of infectious diseases (Patz & Confalonieri, 2005). In this 21st century, disease prevention depends largely on the capability of environment prevention and how we react to the changes (Respati et al., 2016b). In addressing the waste issue, the Indonesian government developed Waste Free Movement 2020 (Ministry of Environment and Forestry, 2015).

Creating communities that are conscious of environmental health problem, especially regarding waste, is crucial to the success of this movement. Sustainability of the program become a major issue, especially since the situation is very diverse. Several studies have suggested to ensure a success of a certain program, it should be integrated with strong community participation and cross-sector cooperation. Political support from the beginning is one factor that determines the success of efforts to empower a community (Respati et al., 2016c). Teamwork is essential.

Good teamwork is an important ingredient in achieving good community participation. A study of university students showed that teamwork among students regardless of the programs they are enrolled is working as an Innovation Generator (Putra & Fibra, 2016). For waste management program to be successful, it depends on community participation to take care of their living environment. It is important to understand the problem holistically to identify the leverage needed.

Several methods in health promotion have already been established. Health promotion using conventional method includes lectures and active learning methods such as discussion, role playing, and storytelling. All the methods have similar objectives which are knowledge sharing. A study in Indonesia showed that knowledge sharing is found at the individual, organisational and technological levels. The technological factor showed the strongest influences. Knowledge-sharing activities in Indonesia are working because the employees are very cooperative and helpful in their implementation (Susanty, Salwa, Chandradini, Evanisa, & Iriani, 2016).

The latest method is gamification approach. Gamification is the application of game-design elements and game principles in non-game contexts (Huotari & Hamari, 2012). Gamification improves user engagement, flow, and learning (Hamari, Koivisto, & Sarsa, 2014). Zichermann and Cunningham defined the concept of gamification as “a process of game-thinking and game mechanics to engage users and solve problems”. This definition focuses on the purpose of gamification and emphasises its goal, that is, user engagement and problem solving (Zichermann & Cunningham, 2011).

Social media are online platforms in which user-generated content can be shared. Facebook, Twitter, and Instagram are some of the popular participative platforms that users can read and post different types of content. Companies and organisations have already successfully exploited this trend by engaging consumers for product marketing purposes. This platform can be extended to promote another topic such as for health promotion on effective waste management.

Over the last decades, gamification has been known as an approach to motivate behavioural change in many fields, including in wellness and health-related contexts. The reason why gamification is widely implemented is because it is proven to be able to get people more engaged and make them more responsible for their health-related decisions (Pereira, Duarte, & Noriega, 2014).

When compared with other approaches, gamification has some important advantages. McGonigal (2011) found that with the right implementation, a gamification approach can promote curiosity, motivate optimism and pride (McGonigal, 2011). Read and Shortell (2011) also found gamification enhances communication, judgment and high-level social skills such as leadership and collaboration (Read & Shortell, 2011). Understanding the significant role of the corporate sector in public health awareness, a simple gamification approach can optimise employee engagement program.

MATERIALS AND METHODS

Pos Bergerak is an integrated employee engagement program designed to motivate all employee of PT. Pos Indonesia (Persero) to take an active role in supporting Indonesia Waste Free Movement 2020, and at the same time optimising employees' role as its brand ambassador.

With around 200 branch offices in 11 regions spread all over Indonesia, designing an effective employee engagement was a complex and challenging task. PT. Pos Indonesia (Persero) considered a different approach that is the possibility of implementing gamification approach and social media in its program.

In general, there are three main supporting elements of the programs:

The content, consisting of series of email, announcement, and articles related to the whole program targeted for internal employees. The content is published on a dedicated webpage: http://posbergerak.id

The communication and coordination channel, mainly using a blog, social media, and internal email system to spread information.

Gamification concept, the concept is implemented in the form of several levels of challenge related to waste management (the system and the people). The first level of the challenge is the simplest activity, designed to lower the entry barrier and motivate the participation. The later challenges are designed to motivate more exploration and delivering a more complex message. A reporting channel and feedback system via email and webpage is provided. The levels of challenge and feedback system are designed to motivate active role of employees in supporting Indonesia's free waste movement 2020. The gamification concept is also implemented in the form of social media engagement (photo contest). The implementation is designed to optimise employee's role as brand ambassador for PT. Pos Indonesia. Special rewards in the form of acknowledgment, appreciation, and monetary reward are provided as motivations.

The program is divided into 4 phases:

Initiation Phase

In this phase, the concepting team (consisting of a team of gamification consultant and internal team of PT. Pos Indonesia) work together to design the program. All related researches were conducted during this phase. The deliverables of this phase are the detailed program, gamification concept, and guideline for the entire processes.

Internal Outreach Phase

This phase focused employee engagement program exclusively for internal employees of PT. Pos Indonesia. The program was presented as series of challenges. Every PT. Pos Indonesia branch offices were allowed participate, and every employee in each branch need to complete the challenge as one team.

There was a total of four challenges:

"*Aksi Bersih Tanda Peduli*": a challenge to conduct office cleaning activity and recycling the collected waste.

"*Memilah Mendulang Arti*": a challenge to collect a minimal of Rp 100.000 from selling/recycling the waste.

"*Berbagi Senyum dan Cerita Pagi*": a challenge to make 20 pictures and share a story of the garbage collector on duty.

"*Silaturahmi Membuka Hati*": a challenge to invite at least 2 active garbage collectors and learn about their stories.

Each team (branch office) can choose to complete one or more of the above challenges. After they complete any challenge, they make a report and send it to their team for a review. Monetary rewards were given for the most successful team.

External Outreach Phase

This phase was conducted at the same time as the National Waste Awareness Day on 21st February 2016. During this period, the employees of PT. Pos Indonesia were asked to be actively involved in cleaning up their surrounding area. We challenged them to share their activities through the social media (twitter and Instagram) with a specific hashtag #posindonesiabergerak. Both social media were selected because of their flexibility and for simple monitoring purpose.

The Appraisal Phase

This was the closing phase where the researchers collected, reviewed, and documented all the activities based on the submitted report. The final documentation consisted of selected report, and the best photos were presented in a book entitled Pos Bergerak 2016. This book contained acknowledgment, rewards, and trophies for those who completed the challenges well.

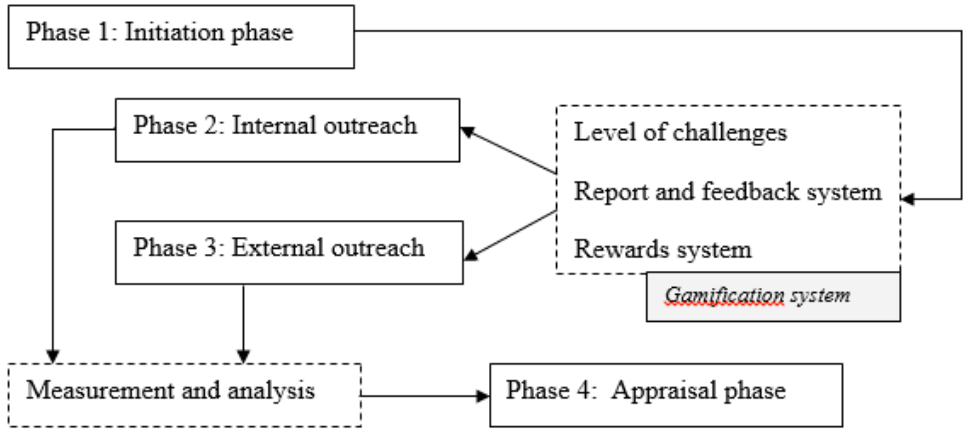

Figure 1. Program flow and phases

The challenges, both in internal and external outreach phase, were part of the gamification concept that was developed. The four challenges in the internal phase were one integrated challenge, where each challenge was connected to another. Each challenge was designed to convey a particular message and objective (as shown in Figure 2). By delivering those four challenges, we hope participants would be able to discover messages through their own experience, known as discovery learning process. Discovery learning is an inquiry-based, constructivist learning theory that takes place in problem-solving situations where the learner draws on his or her own experience and existing knowledge to discover facts and relationships and new truths to be learned (Bruner, 1961).

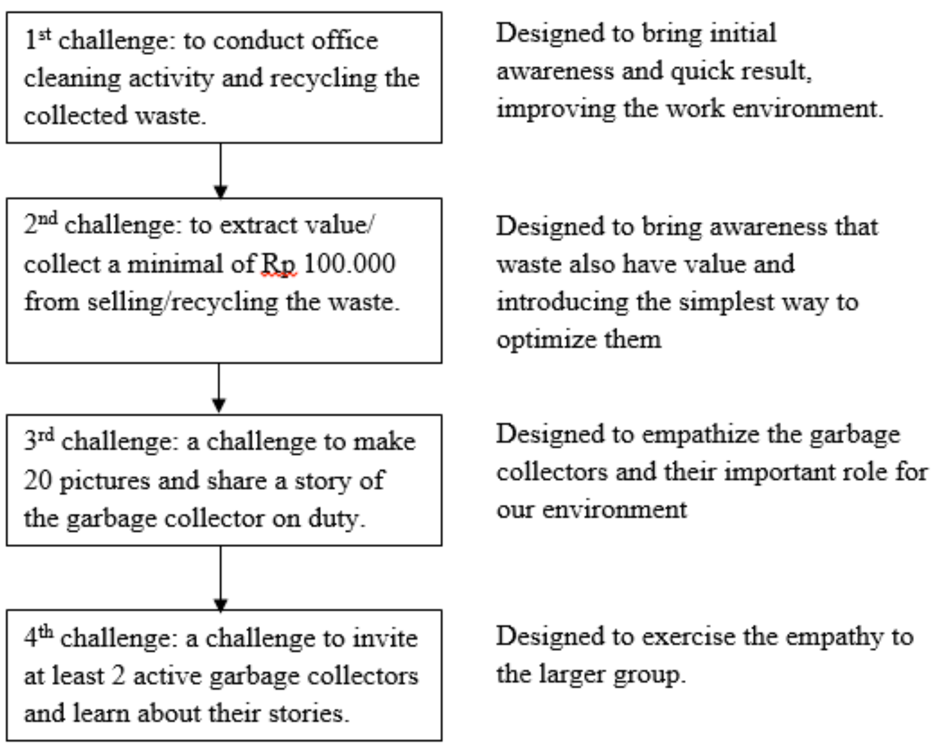

Figure 2. Challenges and objective

During the external outreach phase, we challenged the participants to share their activities through social media. The basic idea of this concept was to create an initial map of an online presentation from the employees of PT. Pos Indonesia, and at the same time, amplifying the brand of PT. Pos Indonesia. This mapping can help to measure the possibility of optimising social media for other engagement processes.

RESULTS AND DISCUSSIONS

Data was collected via internal outreach phase and social media monitoring (external outreach phase). All participants were requested to submit a simple report (a template was provided) to describe which challenge that they have accomplished in addition to providing some insights into their activity. The reports were analysed to measure level of participation, effectiveness of the program and map the online representation. Special hashtag #posindonesiabergerak was used as the main hashtag for social media engagement. Later, the hashtag was measured through social media monitoring platform http://www.followthe-hashtag.com/.

The internal outreach phase began on 9th February 2016 until 19th February 2016. Figure 2 shows during the 10-day period, there were 181 branch offices involved which equivalent to 90% participations. There were 69 branch offices (38%) that participated in all four challenges with regional VI (Semarang and Yogyakarta area) as major contributors.

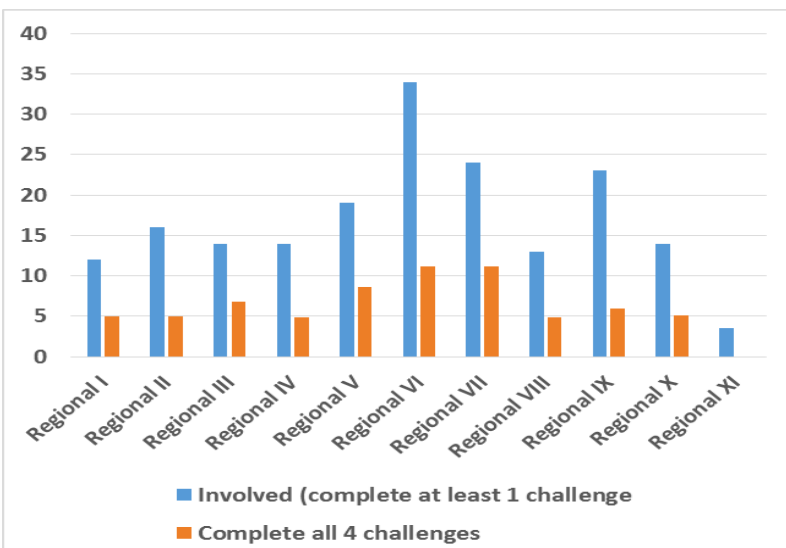

Figure 3. Participation breakdown

External outreach phase started on 11th February 2016 up to the final day at the National Waste Awareness Day on 21st February 2016. In Figure 3, during this 10-day period we had 2.530 tweets and producing more than 15 million impressions (number of times the content was displayed). It has to be noted employees of PT POS Indonesia internal employee produced most of the contents (tweet, photos) related to the waste awareness day, clean environment, and healthy living.

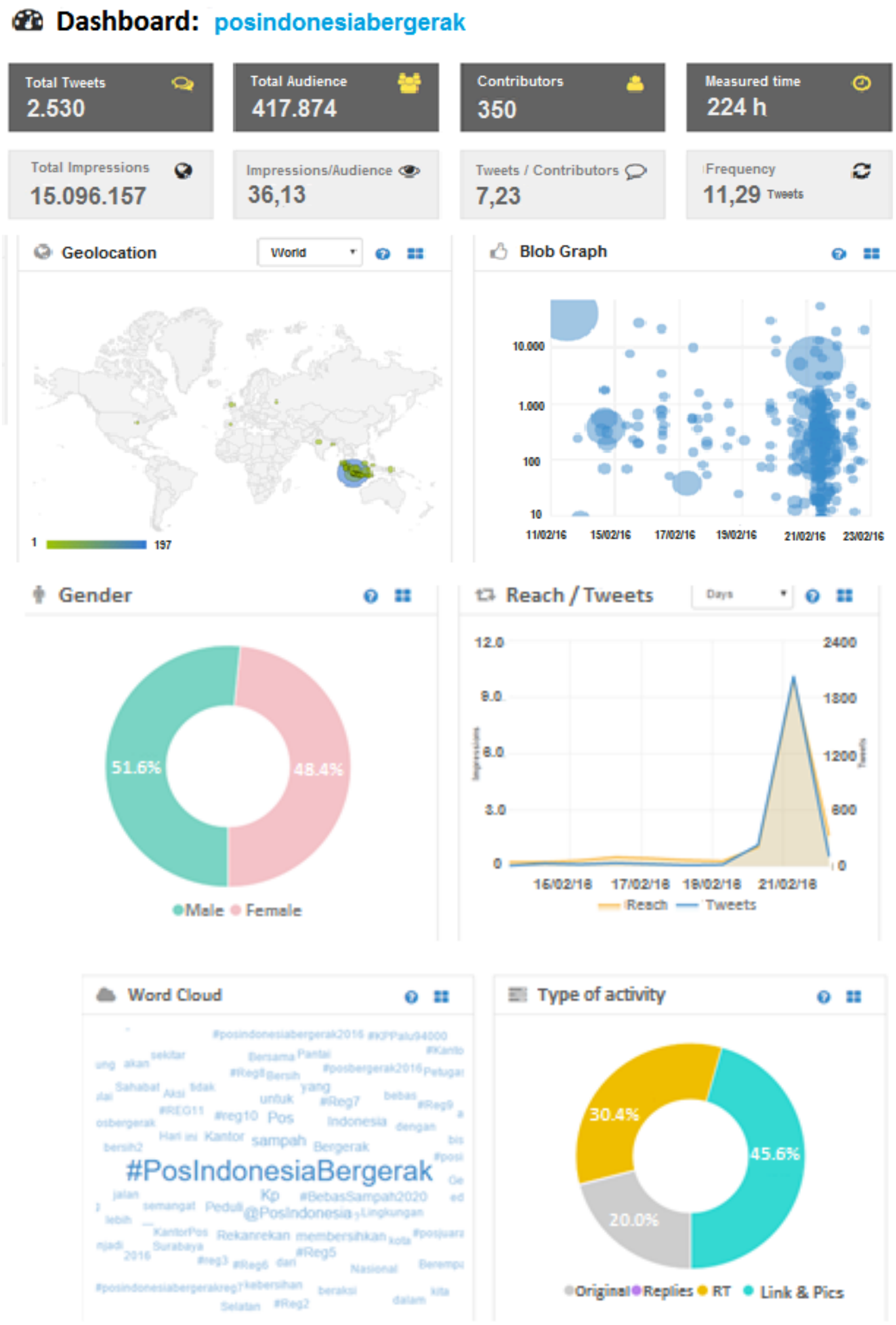

Figure 4. Social media analysis

The appraisal phase led to a production of a report book on Pos Indonesia Bergerak 2016. The booklet was distributed as a token of appreciation for all participants and provide complete memorable stories of all related activities.

Figure 5. Pos Indonesia Bergerak 2016 - report book

After the event, we received reports from several branch offices that they have adopted some of the activities (cleaning, reuse, and recycling) and implemented them regularly. We have also seen a new perspective from the organisation in using social media to promote the brand and internal activities.

The activities above showed that with an interesting and new approach, an employee engagement to involve in certain health promoting program could be achieved. People, including workers, are motivated to behave in a certain way when they feel a sense of autonomy. The activities encouraged people to act creatively which leads to independence. The mastering of social media as specific skills required a change in behavior and employee engagement with their environment showed that they understand that changing behaviour to a larger purpose in life is possible. Workplace health promotion programs will only be effective if it is embedded within a culture of health that respects workers' rights to make informed choices about personal health matters. In certainty, workplaces need to be safe, and employees need to be treated with respect and dignity. Workers also have a right to be in a healthy work environment where positive health behaviours are encouraged and supported. The above activities showed that employee of PT Pos Indonesia can be motivated to play an active role to create a better environment not only for themselves but for the community as well.

CONCLUSION

The corporate sector is believed to play a significant role to educate and bring more awareness on health and environment issues. To do so, we need to find an alignment between business objective and social purpose. In this paper, we have shown that with the right gamification approach and implementation, we can optimise a corporate employee engagement program, not only for the internal (business) objective but also to motivate an active role on health promotion program for the community.

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Power of Analytical Hierarchy Process for Performance Appraisal in Promotion Selection

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ABSTRACT

Job promotion is usually encountered with very complex problems, such as unfairness, non-standard assessment criteria, mistaken strictness, and subjective emotion in the selection of candidate employees to be promoted. This study was conducted in PT XYZ, a small company which had problems in selecting and evaluating the candidate employees for some higher positions in an attempt of improving the effectiveness of their employees' performance. The respondents were nine employees with different positions. The Analytical Hierarchy Process (AHP) system, Expert Choice software, interview, and questionnaire were used to solve the problem. The results show: first, shift 3 supervisor is eligible to get promoted to line A supervisor. Second, shift 1 supervisor is eligible to be promoted to line B supervisor; and third, line B supervisor is more qualified to be promoted to a production manager than supervisor A. They are eligible to be promoted because they have met the criteria according to standard of the performance appraisal using AHP.

Keywords: AHP, performance appraisal, promotion selection

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INTRODUCTION

Performance appraisal is usually used in big capital companies for performance excellence of transformational leadership. It is not common to be used in small companies (Al-Salamin & Al-Baqshi, 2015; Caesar, 2016). Instead, small capital companies still use the traditional system, so that it is undeniable that they make a lot of mistakes when they promote their employees to a higher position as a leader (Somerick, 1993). An appraiser usually conducts an assessment based on the close relationship between the superior and the subordinate without using clear and consistent assessment criteria. Thus, this judgement promotes an employee into the wrong position and hence s/he works ineffectively. The employee cannot run his/her duties, responsibilities, and authority, which are higher than those of the previous position.

In general, employee performance contributes to achieving organisational goals. In this regard, performance appraisal refers to identifying, evaluating, and developing work performance of an employee in an organization (Kavoo-Linge & Kiruri, 2013; McCarthy, 2000). On the other hand, the company gives benefits to its employees in the form of recognition and offering career guidance (Dessler, 2008). It should be clear which criteria can avoid subjective decision-making errors. This is so because sometimes the assessor provides an assessment to the employee based on the feelings and outcomes of the guesswork for this problem; hence, strong measurement capability is needed for calibrating the effectiveness (Shang, 2004). However, many authors argue that the measurement of performance is often challenging because an organization has multiple and frequently conflicting goals (Shang, 2004); however, AHP (Analytical Hierarchy Process) can be an advantageous method with criteria that fit the real-world problems (Erdoğmus et al., 2006).

This study was conducted at PT XYZ electric wire factory in Tangerang, Indonesia. The appraiser company promoted its employees with no clear standard criteria. So, the company found many flaws in the promoted employees' performance because they could not manage problems effectively. Hence, this company would like to change the promotion system. Hopefully, this AHP performance appraisal can avoid many mistakes in order to determine which employees are eligible for promotion. In terms of organizational structure, the production division consists of one production manager. The manager has two line supervisors, named A and B. Each line supervisor has three shift supervisors, called a, b and c. This study had three problems to be answered. First, which employee from the three shift supervisors (a, b, and c) should be promoted to line A supervisor. Second, which one from shift supervisors a, b, and c should be promoted to line B supervisor. Third, which one of both the previous line supervisors should be promoted to a production division manager. This input will give a lot of benefits for general manager decision.

LITERATURE REVIEW

Analytical Hierarchy Process (AHP)

AHP was developed by Saaty in 1976 (Saaty, 2000). So far, this method has been used successfully in various fields. The advantage of this method lies in its criteria, and these criteria fit the real-world problems (Erdoğmus et al., 2006). AHP can be done for more than one period, for decision-making, and with a lot of criteria. Not only that, AHP also facilitates the involvement of decision-makers in the process of finding a solution, and enables them to reassess their judgment when it is necessary (Koç & Burhan, 2014). Thereby, a mutual agreement can be provided among decision-makers prior to their final decision after performance appraisal. AHP method has four general steps even if it is applied in various studies. First, the company has to determine the alternatives of criteria and sub-criteria. Second, the decision-making is modelled hierarchically by considering previously selected criteria (Wind & Saaty, 1980). Third, the decision-makers' judgements are collected through pairwise comparisons. In the last step, the importance ranking of alternatives and criteria will be determined by analyzing these data which are obtained from the comparisons.

AHP has been used in many research areas. It is used for selection of the best alternative, planning, resource selection, conflict resolution, optimization, etc. There are several studies that focus on a review of AHP application in different fields (Table 1).

Table 1
Different fields using AHP approaches

	Industries	Authors
1	Manufacturing	Bitici et al. (2001); Tahriri et al. (2008); Verma and Paeteriya (2013)
2	Marketing	Erbıyık et al. (2012); Eylem and Hasan (2015)
3	Logistics	Alberto (2000); Büyüközkan et al. (2008)
4	Engineering	Chan and Kumar (2007); Partovi (2006); Wu et al. (2009); Yu and Tsai (2008)
5	Commercial Tools	Cebi and Zeren (2008); Schoenherr et al. (2008)

Performance Appraisal for Promotion

Basically, performance appraisal is a formal interaction between employees and supervisors. The higher position in a management structure conducts performance appraisal periodically to identify the strengths and weaknesses of the employees. The objective is to improve performance of the employees and achieve optimum process quality (Aro-Gordon, 2015). Another argument said that performance appraisal is the evaluation of how well employees perform their work when their work is compared to a set of standards (Mani, 2002). In other words, sometimes performance appraisal is also called employee rankings or employee evaluations or job reviews or performance evaluations or assessment results.

Employee performance appraisal has been practiced by numerous organizations for centuries. Until now, performance appraisal has been under debate, but overall, this kind of appraisal is an inseparable part of organizational life (Islam & Rasad, 2006). Longenecker and Fink (Bhattacharya, 2012) believed there are several reasons why formal performance appraisal is needed in organizations.

Formal appraisal is required for creating standards of human resources, such as promotion decision, pay raising, motioning, terminating, and also employees' training needs. Islam and Rasad (2005) explained that a company has high organizational performance if it practices this performance appraisal. The method is successfully proven to be one of the top 10 vehicles in creating a competitive market. A worthless organization has ineffective and inconsistent appraisal. Such appraisal can bring many problems; for example, low morale, low employee productivity, and a lessening of an employee's enthusiasm and support for the organization (Somerick, 1993).

Performance appraisal is a very essential part for an organization to progress towards the company goals (Islam & Rasad, 2005; Simamora, Marcelius, & Hartono, 2016). To achieve the goals, a company needs effective performance management systems in measuring productivity. Productivity improvement is a great concern in numerous organizations, ether private or public. All levels in organization should ensure their departments and units are doing more. In this context, leaders of departments use performance appraisal to measure and to suggest how to improve the productivity of employees (Vallance, 1999). Furthermore, Wu (2005) said performance measurement is a complex problem, and it includes various kinds of judgments and performance measurements. The evaluation needs a well-defined set of criteria and strong values. His argument is based on the previous argument (Sidin et al., 2003). Sidin et al. stressed on identification of the relevant and important criteria for any kind of evaluation. In addition, Roberts (2003) highlighted the conceptual foundation of participation. Participation includes the intrinsic motivational value, the expansion of available information, and the opportunity to interject employee voice. Sidin et al. believed employees should be confident in the fairness of the appraisal process, so it will be easier for the employees to accept performance rating if they perceive fair decision-making process. In any case, if the employees perceive the process to be unfair, not systematic, and incomprehensive, they will reject the outcomes of the appraisal, and they will even look for another job (Sidin et al., 2003).

The benefits of performance appraisal include increased motivation of employees, improved performance, and increased self-ambition of employees. Furthermore, it encourages the value added development of employees' self-esteem because the appraisal is transparently done in the organizational system. Finally, it can justify the organizational goals (Mohrman et al., 2012).

MATERIALS AND METHODS

Data for this research was collected using several techniques, namely: 1) Observation in order to get an overview of the company's problems and the performance appraisal thus far done by this company; 2) Interviews or two-way communication to explore the information pertaining to research objectives, such as organizational structure, previous employee performance appraisal system, and the sub-criteria and criteria for employee performance appraisal; 3) Questionnaires distributed to the appraisers (the production manager, line A supervisor, and line B supervisor) to obtain the initial criteria of promotion selection, and also to weigh each alternative; 4) The required sample was only 3 appraisers who were in charge in every division from three divisions (see Figure 1); 5) Expert choice was used for AHP. The program of Expert Choice can be used as a tool for choosing from several alternative decision criteria. This software offers several facilities, ranging from data criteria, sub-criteria, and destination determination. Moreover, it can be applied easily with a simple interface.

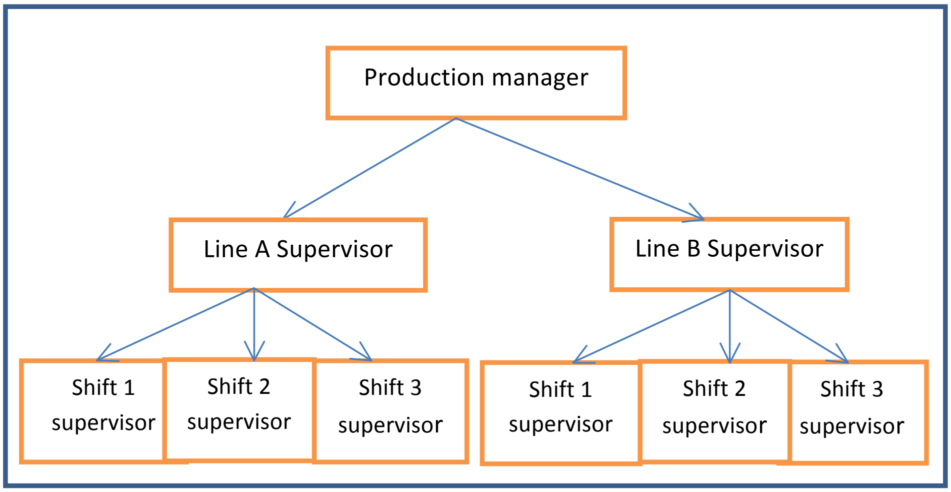

Figure 1. The hierarchical structure of the production department in PT XYZ

This study was conducted to examined problems among production manager, line A supervisor, and line B supervisor. Production manager supervises both line A and B supervisors, while each line supervisor has three shift supervisors. The decision makers would like to carry out performance appraisal for promotion based on six aspects or criteria, namely quality of work, initiative, discipline, responsibility, cooperativeness, and leadership. The criterion of quality of work has sub criteria such as job satisfaction and knowledge and education in the field of work. Initiative has the sub-criteria of new ideas and quickly taking action in case of machine damage. Discipline has the sub-criteria of discipline in dress and discipline in time. Responsibility has the sub-criteria of responsibility to the subordinates and responsibility to the superior. Cooperativeness has the sub-criteria of being cooperative with other employees and cooperative with the superior. Leadership has the sub-criteria of a fair attitude towards employee and providing clear directions in accordance with the established procedures. Therefore, this research was done using Analytical Hierarchy Process method. The AHP or Analytical Hierarchy Process method is a decision-making technique developed for cases that have various levels (hierarchical) of analysis (Ho, 2008; Saaty & Vargas, 2001).

RESULTS AND DISCUSSIONS

In the first stage, data of the criteria and sub-criteria for performance appraisal were collected from three decision makers: shift supervisor, line supervisor, and production manager. They have the responsibility to select employees for promotion (see Table 2).

Table 2
Goal: Performance appraisal for position promotion under Line A supervisor

	Criteria	Score	Sub criteria	Score
1	Work quality	0.148	Job satisfaction	0.9
			Knowledge and education in the field of work	0.1
2	Initiative	0.078	New ideas	0.875
			Quickly take action in case of machine damage	0.125
3	Discipline	0.252	Discipline in dressing	0.833
			Discipline in time	0.167
4	Responsibility	0.278	Responsibility to the subordinates	0.9
			Responsibility to the superior	0.1
5	Cooperativeness	0.121	Cooperative among employees	0.875
			Cooperative with the superior	0.125
6	Leadership	0.123	A fair attitude towards employees	0.9
			Clear directions in accordance with the established procedures	0.1
	Inconsistency	0.09		

Source: Data Processing, 2016

Table 2 shows the criterion of responsibility has the highest score with 0.278, where the sub-criterion of responsibility to subordinates (0.9) is higher than that of the sub-criterion of responsibility to the superior (0.1). The criterion of discipline has the second highest score of 0.252, in which discipline in dress as its sub-criterion (0.833) is greater than discipline in time (0.167). The criterion of work quality places the third with a score of 0.148, in which the sub-criterion of job satisfaction (0.9) scores higher than knowledge and education (0.1). The criterion of leadership is in the fourth place with the sub-criterion of a fair attitude towards employees (0.9) being higher than the sub-criterion of providing clear directions (0.1). The criterion of cooperativeness is in the fifth place (0.121), where the sub-criterion of cooperation with other employees (0.875) is higher than cooperation with the superior (0.125). The criterion of initiative is in the sixth place (0.078) with the sub-criterion of quickly taking action in case of machine damage (0.875) being higher than new ideas (0.125). All of the criteria of performance appraisal are supported by previous research (Mohrman et al., 2012). Inconsistency in all criteria and sub-criteria (0.09) is lower than 0.1 as the fault tolerance value (Aro-Gordon, 2015). The score can be categorised as good or consistent because it is less than 0.1 (Saaty & Vargas, 2001).

Table 3
Dynamic sensitivity for criteria performance of each supervisor in Shift A

The score of the criteria	The highest to lowest criteria	Percentage of being promoted
14.8 % Work quality	Shift supervisor 2, 3,1	40.2 % Shift supervisor 3
7.8 % Initiative	Shift supervisor 2, 1,3	33.6 % Shift supervisor 2
25.2 % Discipline	Shift supervisor 3,1,2	26.2% Shift supervisor 1
27.8 % Responsibility	Shift supervisor 2, 1,3	
12.1 % Cooperativeness	Shift supervisor 3,1,2	
12.3 % Leadership	Shift supervisor 3,1,2	

Source: Data Processing, 2016

In the second step, the results show that the employee who is in charge of shift 3 supervision has the highest score (40.2%). According to this result, this person is most eligible to get promoted to line A supervisor. In the second sequence, the person in charge of shift 2 supervision is placed in the middle rank (with a score of 33.6%), and the person in charge of shift 1 supervision is in the lowest rank (26.2%). These ranks show how well employees perform according to a set of standards. It is very important information for decision makers to promote which one is eligible to be selected for a higher position (Mani, 2002).

Table 4
Goal: Performance appraisal for promotion under Line B Supervisor

	Criteria	Score	Sub-criteria	Score
1	Work quality	0.271	Job satisfaction	0.500
			Knowledge and education in the field of work	0.500
2	Initiative	0.111	New ideas	0.500
			Quickly taking action in case of machine damage	0.500
3	Discipline	0.107	Discipline in dress	0.500
			Discipline in time	0.500
4	Responsibility	0.206	Responsibility to the subordinates	0.500
			Responsibility to the superior	0.500
5	Cooperativeness	0.131	Cooperative among employees	0.500
			Cooperative with superior	0.500
6	Leadership	0.173	A fair attitude towards employees	0.833
			Clear directions in accordance with established procedures	0.167
	Inconsistency	0.08		

Source: Data Processing, 2016

In this part, we explain the sub-division in line B supervision with three shift supervisors. Table 3 indicates the criterion of work quality is in the first place with a score of 0.271, in which the sub-criterion of job satisfaction (0.5) scores the same as the sub-criterion of knowledge and education in the field (0.500). The criterion of responsibility is in the second place, with a score of 0.206, where responsibility to the subordinates as its sub-criterion (0.500) gains the same score as responsibility to the superior (0.500). The criterion of leadership is in the third place (0.173), in which a fair attitude towards employees as the sub-criterion (0.500) has the same score as a fair attitude towards employees (0.500). The criterion of cooperativeness gets the fourth place (0.131), with the sub-criterion of a fair attitude towards employees (0.500) having the same scores as cooperation with other employees (0.500). The criterion of initiative is the fifth place (0.111), where the sub-criterion of new ideas (0.500) gains a score as big as that of quickly taking action in overcoming the damage of a machine (0.125). The criterion of initiative is in the sixth place (0.078), in which the sub-criterion of quickly taking action in machine damage (0.875) is higher than new ideas (0.125). All criteria of performance appraisal are supported by previous research (Mohrman et al., 2012). Inconsistency in all criteria and sub-criteria (with a score of 0.09) is lower than 0.1 as the fault tolerance value (Aro-Gordon, 2015); hence, the score means the criterion is good or consistent (Saaty & Vargas, 2001).

Table 5
Dynamic sensitivity for criteria performance of each supervisor in Shift B

The score of the criteria	The highest to lowest criteria	Being promoted
27.1% Work quality	Shift supervisor 1, 3,2	43.1% Shift supervisor 1
11.1% Initiative	Shift supervisor 3, 1,2	29.7% Shift supervisor 2
10.7% Discipline	Shift supervisor 1,2,3	27.2% Shift supervisor 3
20.6% Responsibility	Shift supervisor 2, 1,3	
13.1% Cooperative	Shift supervisor 3,1,2	
17.3% Leadership	Shift supervisor 1,2,3	

Source: Data Processing, 2016

According to the criteria and sub-criteria of selection, shift 1 supervisor has the highest score (43.1%). Thus, shift 1 supervisor is eligible to be promoted to line B supervisor. In the second sequence, shift 2 supervisor has a score of 29.7%, and shift 3 supervisor gets the lowest score of 27.2%. The evaluation is on how well employees perform their work when their work compared to a set of standards. The result can be made the basis for position promotion for employees (Mani, 2002)

Table 6
Goal: Performance appraisal for production manager position

	Criteria	Score	Sub-criteria	Score
1	Work quality	0.189	Job satisfaction	0.875
			Knowledge and education in the field of work	0.125
2	Initiative	0.081	New ideas	0.8
			Quickly taking action in case of machine damage	0.1
3	Discipline	0.155	Discipline in dress	0.5
			Discipline in time	0.5
4	Responsibility	0.152	Responsibility to the subordinates	0.5
			Responsibility to the superior	0.5
5	Cooperativeness	0.248	Cooperative among employees	0.750
			Cooperative with superior	0.250
6	Leadership	0.176	A fair attitude towards employees	0.833
			Clear direction in accordance with established procedures	0.167
	Inconsistency	0.10		

Source: Data Processing, 2016

Table 6 indicates the criterion with the highest score for a production manager is cooperativeness. This criterion is in the first place (0.248) with the sub-criterion of being cooperative with the subordinates (0.9) in the first place and the sub-criterion of being cooperative with the superior (0.1) second. The second place is occupied by the criterion of work quality with a score of 0.189, in which the sub-criterion of job satisfaction gains a score of 0.9. The third rank is the criterion of leadership with a score of 0.176, in which the sub-criteria of a fair attitude towards employees (0.833) is higher than the sub-criterion of clear direction in accordance with the established procedure (0.167). The fourth is the discipline criterion with a score of 0.155 with the sub-criterion of leadership, which is a fair attitude towards employees (0.9), higher than the sub-criterion of providing clear direction in accordance with the established procedures with a score of 0.100. The fifth is the criterion of responsibility (0.152), in which the sub-criterion of cooperativeness of being cooperative with employees places the first with a score of 0.875 and the sub-criterion of being cooperative with the superior places second with a score of 0.125.The last one is the criterion of initiative with a score of 0.081, where the-sub criterion of quickly taking action in overcoming the damage of a machine gets a score of 0.875, followed by the sub-criterion of new idea with a score of 0.125. The fault tolerance value applied is 10%, corresponding to a consistent value of 0.10, which can be described as good result. This result means that all criteria, sub-criteria, and alternatives are good or consistent. This result means that all criteria, sub-criteria, and alternatives are good or consistent. The result of evaluating how well employees perform compared to a set of standards can be made the basis for promotion of employees (Aro-Gordon, 2015; Mani, 2002; Saaty & Vargas, 2001)

Finally, the sub-criterion of initiative to quickly take action in overcoming the damage of a machine is ranked first with a score of 0.875, followed by the sub-criterion of initiative to give new idea with a score of 0.125.

Table 7
Dynamic sensitivity for criteria performance of each supervised line

The score of the criteria	The score of the highest to lowest criteria	Shift supervisors being promoted
18.9 % Work quality	Line A, B supervisors	50.3 % Line A supervisor
8.1 % Initiative	Line B, A supervisors	48.7 % Line B supervisor
15.5 % Discipline	Same position	
15.2% Responsibility	Line B, A supervisors	
24.8 % Cooperative	Line A, B supervisors	
17.6 % Leadership	Line A, B supervisors	

Source: Data Processing, 2016

50.3%, greater than that of line B supervisor with a score of 48.7%. Line A supervisor is more eligible than line B supervisor to be a production manager according to their performance (Aro-Gordon, 2015; Mani, 2002; Saaty & Vargas, 2001). Nevertheless, the scores are not too different, so strong measurement capability is needed for calibrating the effectiveness (Shang, 2004). Many authors argue that the measurement of performance is often a challenge because organizations have multiple and frequently conflicting goals (Shang, 2004). The result still needs the involvement of decision-maker(s) to find the solution and enable reassessments of judgments (Koç & Burhan, 2014).

CONCLUSION

The results show that AHP method can be applied in all divisions of this company. Based on the collected data and the output produced by Expert Choice program for employee performance appraisal for promotion, it can be concluded as follows:

1. Shift 3 supervisor is the most eligible shift supervisor for promotion to the position of line A supervisor in this company.
2. Shift 1 supervisor is the best shift supervisor eligible to be promoted to the position of line B supervisor in this company.
3. Line A supervisor is the most eligible line supervisor to be promoted to production manager position in this company.

SUGGESTIONS

After drawing some conclusions, it can be suggested that:

1. AHP can minimize the subjectivity of performance appraisal. With this method, the company can measure the achievements and abilities of a person objectively. The elements such as honesty, discipline, work performance, cooperativeness, skills, loyalty, leadership, communicativeness, and education of an employee should be taken into consideration in the implementation of promotion.
2. The sub-criteria of the company can be used to perform more specific performance assessments to its employees. The company should look more broadly at the criteria in performance appraisal for promotional positions.
3. The heads of the company as line supervisors and production manager should perform their leadership duties effectively and motivate employees to be more enthusiastic in working, to have high discipline, and enhance productivity to gain the optimum profit for the company.

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Analysing ERP Implementation Critical Success Factors for SME: A Study of SAP One Implementation in Jakarta

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ABSTRACT

Stimulating the development of local Small Medium Enterprises (SME) has been an important agenda for Indonesia to strengthen its local and regional economy. The SMEs here have their own unique characteristics. The government had set up Enterprise Resource Planning (ERP) system to improve SME's business process and to share knowledge. However, implementing a successful ERP comes with its own challenges. This research investigated the factors that led to a successful ERP implementation. Using case studies, in-depth interview and observation at Trinity Era Aplikasindo, one of SAP representatives in Indonesia, as well as literature review, this study found factors such as Top Management support, good change management, and training have a significant impact on a successful ERP implementation in SME. This article discusses a comprehensive approach to understanding how ERP contributes to the success of SMEs.

Keywords: Business improvement, critical success factor, enterprise resource planning, sharing of knowledge, SMEs

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INTRODUCTION

Small Medium Enterprises have contributed extensively to Indonesia's growth by contributing to its GDP and job creation. The SMEs also help to stimulate local and regional economy. According to a government website (www. depkop.gov. id) SMEs account for 90 per cent of all employment in Indonesia. Therefore, SMEs contributes to national income and also creates jobs and strengthens the regional economy.

The ERP serves as a cross-functional enterprise backbone that integrates and automates many internal business processes and information systems within the manufacturing, logistics, distribution, accounting, finance, and human resources (O'Brien & Marakas, 2010). The use of ERP has been considered as a major determinant to gain competitive advantage (Dezdar & Ainin, 2011). The Goal of ERP is to allow a company to manage its business with potential benefits of improved process flow, reduced inventories, better data analysis, better customer service, and improved profit margins (Fan & Fang, 2006).

Therefore, understanding how ERP works for SME is both useful and interesting and useful to boost the efficiencies of SMEs.

LITERATURE REVIEW

Enterprise Resource Planning

Earlier studies have examined how companies face increasing competition, market expansion, and rising expectations. This pressures the companies to increase productivity and efficiency and that is where ERP benefits them: 1) a unified enterprise view of the business that encompasses all functions and departments; and 2) an enterprise database where all business transactions are entered, recorded, processed, monitored, and reported (Umble & Umble, 2002).

Data integration is where clean data can be entered once into the system and then reused across all applications (Motiwala & Thompson, 2012). Dantes and Hasibuan (2011) also found out that implementation would boost the value of company's stock, and it can improve public confidence. Implementing a new software in a company is a real challenge for managers. ERP system is one of the most complicated information systems for the organisation (Umble & Umble, 2002). The ERP implementation is a lengthy and complex process, and there have been many cases of failure to produce good outcome (Parr & Shanks, 2000).

Majed (2000) reported that 70% of ERP implementation did not achieve their estimated benefits. Langenwalter (2000) even claimed that 40% to >60% of ERP implementation could be classified as "Failures." The result of an unsuccessful ERP implementation can even lead into bankruptcy (Markus, Axline, Petrie, & Tanis, 2000). Dantes and Hasibuan (2011) found out that in Indonesia, 33% of companies failed in implementing a successful ERP system. However, these failures were not due to incorrect coding of the ERP software but inability of the companies to understand their organisational needs and to solve their business problems. Thus, what are the critical success factors to minimise the failure of ERP Implementation.

Due to saturation of ERP targeting large-scale enterprises, ERP system manufacturers today are also focusing on the growing market of small and medium-sized enterprises (SMEs) (Deep, Guttridge, Dani, & Burns, 2008). The ERP system manufacturers are competing to provide the best ERP system for SME nowadays. One of them is SAP Business One which is business management software designed for SMEs.

Small Medium Enterprises (SME)

The SMEs foster economic growth, boost employment and alleviate poverty. In 2004 alone, the World Bank Group approved an estimated USD$2.8 billion to support of micro, small and medium enterprises. There is also a growing recognition of the role that SMEs play in sustained global and regional economic recovery.

This area of research has been crucial, especially for developing countries that still require substantial economic improvement. A World Bank Group study suggests there are 365 - 445 million micro, small and medium enterprises (MSMEs) in emerging markets: 25-30 million are formal SME while 55-70 million are formal micro enterprises, and 285-345 million are informal enterprises.

Indonesia is one of the biggest economies in Asia and has a very good potential market and investment opportunities. The Indonesian government have taken steps to nurture and increase the growth of SME. Under the Kredit Usaha Rakyat (KUR – the People's Credit Scheme) scheme, an initiative to nurture the growth of small business, the Ministry of Finance provides insurance for 70% of loans given to SMEs, while banks take up the rest. In 2014, the six participating national banks provided more than 11.3 million SMEs with a combined Rp146.3trn ($11.2bn) of funding under the KUR programme. A total of 26 regional lenders also signed up for the initiative. Smaller businesses also faced technology and training challenges. According to a recent report by Deloitte, published in August, just over one-third of Indonesian SMEs are offline, while another 37% has only basic online capabilities. (oxfordbusinessgroup.com). According to Bank Indonesia, micro businesses are those havin Rp. 50.000.000, in net worth and up to Rp. 500.000.000 for Medium-scale business.

Research Gap

Markus et al. (2000) argued there are no agreed measures on defining ERP system implementation success.

Many studies have focused on characteristics of ERP (Ayyagari, Beck, & Demirgüç-Kunt, 2007; Bernroider & Mitlöhner, 2005; Shahab, Ahmed, & Khan, 2009). Some of this research has taken a perspective of the company, some taking the perspectives of the users. None took the perspective of an IT consultant. Their point of view would be quite interesting because they understand the operational characteristics, the consumer and the software.

Leyh (2014) studied ERP implementation from 1998 to 2013. He identified several factors in ERP implementation, from perspective and categorisation, which was divided into Strategic, tactical perspective and Technological and Organisational aspect as well as Critical Success Factor Categorisation.

Table 1
Critical success factor categorization

	Strategic	Tactical
Organizational	Clear goals and objectives	User Training
	Top management support and involvement	Communication
	Project team leadership / Empowered Decision makers	
	Balanced project team	
	Involvement of end-users and stakeholders	
	Company's strategy / strategy fit	
Technological	Organisational fit of the ERP system	ERP system tests
	ERP System configuration	

The research addressed Critical Success Factor for ERP implementation: Organisational factor and Technological factor. However, regarding ERP implementation, it appears that the main issues and challenges come from the people and regulation which are related to the organisation (Leyh, 2014). The current research focused on the organisational aspect, using the top five factors, which are 1) Top management support and involvement, 2) Project Management 3) User training 4) Balanced project teams 5) Change Management. These are called Strategic – Organisation matrix. In many occasions both from company or software developer point of views, employee readiness is also an important factor in implementing new system (Salwa & Susanty, 2016).

The purpose of this study is to have a better understanding of Strategic – organisational aspect that play an important role in ERP implementation, more specifically ERP implementation for Small Medium Enterprises in Indonesia. This can be very useful not only for the SME but also to the government and authorities on how to integrate technology to promote SME in Indonesia.

MATERIALS AND METHODS

This research was conducted using a qualitative approach, with data triangulation to conduct a robust research. Several approaches were used 1) interview 2) Observation 3) Literature Study 4) Case study. The source of data is both primary and secondary source for a reliable and dependable data analysis.

Primary data was obtained through observation of the implementation process. This was followed by a structured interview with some senior consultants, who have some experience with a successful implementation. The interview was aimed at obtaining Critical Success Factors that will determine successful implementation.

Literature review boosted analysis of primary data. A qualitative approach was used to explore behaviour, perspective, and experiences of people they study (Holloway, 1997). The experiences of consultants are the desired inputs that the researchers wanted to analyse.

Data Collection

Data used were in the form of words (Sekaran & Bougie, 2010). The researcher conducted in-depth interviews with two top management personnel, and six senior consultants. Interviews, observation and literature review were the methods adopted for this study. Primary and secondary source of data were included for a reliable and dependable data.

The primary source of data refers to information obtained first-hand by the researcher on the variables of interest for the specific purpose of the study (Sekaran & Bougie, 2010). Researchers observed the implementation and the factors underlying it.

Interviews were also conducted with consultants who have experience with a successful implementation. The interview offers an insight into critical success factors that influence a successful implementation.

Finally, literature review was conducted to support the findings and suggestion of future research.

Data Analysis Method

A qualitative research method was adopted in this study. Data was selected, coded, and categorised (Sekaran & Bougie, 2010).

Coding is an analytic process through which qualitative data gathered is reduced, rearranged, and integrated. The purpose of coding is to help you draw meaningful conclusions about the data (Sekaran & Bougie, 2010) before it is analysed.

Purposive sampling method was used in this research. The participants were chosen based on pre-selected criteria relevant to a particular research question (Bernard & Ryan, 2010; Wahyuni, 2012).

RESULTS AND DISCUSSIONS

A key to a successful implementation is to deliver the software as expected. The expectation comes from the top management because they are the people who make a decision of ERP system and in the position to make a crucial decision. Therefore, fulfilling the expectation of the top management is critical to a successful implementation.

In this research, Top Management support is the most significant success factor. A successful implementation is greatly influenced by top management, especially in terms of decision making which is often considered as a complex and time-consuming process. Having top management capable of making a fast decision is very helpful in ensuring the project is completed on time. Decision making must be in the hands of the top management because they are responsible in implementing ERP system. Crucial decisions are made by top managers. Other roles that also influence successful implementation is supervision, namely to keep the project on track and fulfil expectations of top management.

Change management is the second critical success factor the success of an implementation. Having a new system means that employees must change their culture in doing their daily job. The consultant is not in the position to force employees to change. That is why a consultant needs full support from the management. Specifically, executive management support is the most influential in change management of SME. The change is normally led by top managers or executive managers, and it must be done in a short period of time. Implementing ERP in SME usually takes three months from kick-off meeting to go live with the system.

Implementing a system change must be supported by training. Training is also considered as critical in change management influencing the success in implementing ERP. Egan and Fjermestad (2005) found that resistance is a product of people lacking skills, or they do not understand the changes initiated by the application of the new ERP system. A way to minimise resistance due to lack of skills is via training. Every training is done, so employees know how to use the new software. The consultant also has to share their knowledge and best practices about the software, so employees understand the changes necessary for the implementation of the new ERP system.

Balanced Project Teams (ERP team composition, skill, and compensation) is not exactly the most influencing factor in a successful implementation. However, this factor also has interesting points for an implementation. Based on the observation and interview, the project teams must have rich knowledge of both business process and technical requirements. The leader should not only have much knowledge but also have the authority to make some minor decision to reduce delays in decision-making process. Therefore, the right composition of the team is essential not only so that they can learn to use the system, but also that they can understand the purpose of the system and to be able to communicate well with the consultants.

CONCLUSION

In considering Critical Success Factor for a system implementation, two factors must be considered: organisational and technical aspects. This study was focused on implementing a SAP One software which was a simple version of SAP targeted for SMEs but at a considerably more affordable price.

Based on observation and in-depth interviews, the organisational aspect is very important. The factors most critical to a successful implementation were top management support, change management and proper training. However, this research also added balanced project teams, even though it didn’t always occur (from the interviews) as a significant factor but from observation and literature review, balanced project teams were important. Balanced project team understood as the right composition of people, and the skill the possessed together with the right amount of compensation based on their contribution to the project. Putting together a team that has a good understanding and capability to communicate with the consultants makes a difference to achieve a successful implementation.

Recommendation

Based on the analysis, the study suggests a member of top management to be in charge of implementing a project. The top management assigned to the project should possess not only excellent decision making but also a decent understanding of the system.

A further question was asked to the consultant on what they find as the most critical success factors. The answer was communication. The level of communication is one of the most critical non-organisational-strategic critical success factors. There has to be an efficient communication between consultants and clients.

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Apprenticeship Model in Entrepreneurship Learning at University

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ABSTRACT

This paper examines to which extent apprenticeship model of learning can influence entrepreneurial attitudes and motivation of students. This is a quasi-experimental study using pre-post-test design. Participants were 40 students of Business Management Education Program, Faculty of Economics and Business Education, Universitas Pendidikan Indonesia (UPI), class of 2013. The paired sample t-test was used to test the hypothesis. Results showed a significant improvement in entrepreneurial attitudes and motivation of students as a result of the implementation of the model.

Keywords: Apprenticeship model of learning, entrepreneurial attitudes, entrepreneurial motivation

INTRODUCTION

Indonesia faces very high unemployment rate, especially over the past four years. More specifically, the rate of unemployment among university graduates increased from 398,298 in 2014 to 565,402 in 2015, and to 695,304 in 2016 (Central Bureau of Statistics, 2017).

This needs to be addressed urgently as prolonged unemployment leads to social and economic problems, including crimes. Government agenda cannot be implemented if most university graduates are job seekers instead of job creators. This situation can be traced to the learning process currently applied in the universities that focuses more on how to prepare the students to finish their study soon and get jobs, rather than how to create jobs.

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Entrepreneurship is the key to the success of a country's economic development, especially in developing countries (Niranjan & Krishnakumare, 2016). In addition, entrepreneurship is important to eradicate poverty (Ruswanti, 2016). One of the efforts to create new entrepreneurs and to reduce unemployment is through the entrepreneurship education. Entrepreneurship education emphasises creation of knowledge, attitude and motivation, and individual skills to undertake entrepreneurship activities. Entrepreneurship education is designed to change the students' orientation and attitude through a process that provides the students skills and knowledge that enable them to start and manage a business (Agu, 2006). Entrepreneurship education deals with the attitudes and skills necessary for individuals to respond to the environment in the process of conservation, starting and managing a business enterprise (Emereton, 2008). The aim of entrepreneurship education is to provide special knowledge and skills for decision making in entrepreneurship (Uebelacker, 2005).

Development of education should be geared towards a competent human. Innovation should be the priority of development to generate various competitive advantages. The system of education in Indonesia is heavily geared towards to learning to know, not on learning to do (Siswoyo, 2009). Without significant innovation in education, the outcome will be graduates who are dependent on other people. In Indonesia, the apprentice model has not been optimally implemented in entrepreneurship learning. The entrepreneurship education must ensure the graduates are independent and to be innovative.

The process of education must be creative and innovative to grow the entrepreneurial interest and attitude of the students. The process of education is important to encourage the concept of entrepreneurship education. With constant entrepreneurship education embedded in the curriculum and student activities, it is expected that in 2014, 20% of university graduates will be successful entrepreneurs (Kartadinata, 2009). In the context of higher education, entrepreneurship learning is an application of entrepreneurship education. The entrepreneurship learning is a process to acquire the cognitive knowledge, to structure the knowledge, and to obtain the meaning of the experience (Rae & Carswell, 2000).

The current curriculum of entrepreneurship learning at Universitas Pendidikan Indonesia (UPI) merely focuses on cognitive knowledge so that entrepreneurial attitude and motivation of students are relatively low. In order to nurture students' entrepreneurial attitude and motivation, it is necessary to provide them the real experiences in real business. One way to get the real experience is through apprenticeship. In fact, apprenticeship has a positive and significant influence on entrepreneurial attitude, entrepreneurial motivation and entrepreneurial behaviour (Mulyadi, 2011).

There are several efforts to create new student entrepreneurs, such as through the Student Entrepreneurship Programme, Self-supporting Entrepreneurship, and Entrepreneurship Course. It is expected that the entrepreneurship learning integrated with apprenticeship will develop entrepreneurial attitude and motivation of students. In this context, educational institutions have offered opportunities of experiential learning for students to ensure that they find an area they are comfortable with for the future. Through forms of temporary anticipatory socialisation work assignments, such as cooperative education and internships, the student can transfer and connect classroom concepts to actual work experience (Nicholas, 2016). This paper focuses on the entrepreneurship course which has a provision for apprenticeship.

The research problems are: (1) whether or not there is an increase in students' entrepreneurial attitudes after the implementation of apprenticeship learning model in entrepreneurship course, and (2) whether or not there is an increase in students' entrepreneurial motivation after the implementation of apprenticeship learning model in entrepreneurship course.

LITERATURE REVIEW

The concept of entrepreneurship is divided into two definitions: entrepreneurship as a process and entrepreneurship as an ability. As a process, entrepreneurship is the implementation of creativity and innovation to solve problems and find opportunities to improve business (Zimmerer, Scarborough, & Wilson, 2005). Entrepreneurship is the process of creating something new in terms of value, using the required time and effort, bearing the financial risk, accompanied physical and social risks, receiving generated monetary rewards, satisfaction and personal freedom (Hisrich & Peters, 2002). Thus, entrepreneurship is combination of creativity, innovativeness, and courage to take the risks in an effort to nurture and establish new businesses.

Entrepreneurship is a creative and innovative ability as the basic, trick, and resources to explore the opportunities to success (Suryana, 2011). In the context of business, entrepreneurship is the result of a disciplined, systematic process of applying creativity and innovations to needs and opportunities in the marketplace. The success of entrepreneurship will be achieved by thinking and doing new things, or doing old thing in new ways, or doing old thing in a different way. An entrepreneur is a creative and innovative person who seeks opportunity for success. Entrepreneurs change existing economic order by introducing new products and services, by creating new forms of organisation, or by using new raw material. An entrepreneur is also one who creates a new business in the face of risks and uncertainty for the purpose of achieving profit and growth by identifying significant opportunities and capitalising on the available resources.

Considering that entrepreneurship likely leads to success, the encouragement for success is important (Alma, 2010). The relationship between motivation and success is reciprocal and entrepreneurship is highly correlated with success (Mulyadi, 2011). Therefore, to create new entrepreneurs, entrepreneurial attitudes and motivation must be nurtured through education, particularly through apprenticeship in university by providing students work experiences as part of their curriculum before they graduate. Learning process that relies only on giving lectures to students in classrooms without providing real-world learning opportunities or work experience would likely cause low entrepreneurial attitude and motivation among students.

Apprenticeship or learning by doing is one of the learning processes that may provide real experience to the students, through obtaining and mastering the skills at work with or without instruction from the other skilled person at work. In this sense, apprenticeship is a learning process where the students will follow the style of their instructors (Kamil, 2007). In a broad sense, apprenticeship is a method to prepare a person to become entrepreneur. During the learning process, students attempt to understand the process of production and the quality of a product, understanding the method both from the aspect of technology and organisation, knowing the market of the products, understanding the problems and how to solve them, and to develop their creativity and innovativeness to start entrepreneurship (Dikti, 2010).

As a system, apprenticeship can be seen from the aspects of learning process and management (Djatnika, 2009). As a learning process, consists of three components: input, process, and output. The input is the instrumental input, raw input, and environmental input. The process involves the interaction of the input components. The output is the graduates' academic and behavioural quality, as a result of the learning process. Several traits which can be drawn from the characteristics of the learning process are self-facing learning modules, faculty teams, field experience, personalisation strategies and facilities. As a learning management, there are three cores of apprenticeship: students, instructors (teachers, tutors, facilitators), and learning materials. The learning management is important for three reasons: involving various parties, managerial roles, and activities to help, serve, and direct all events to achieve the objectives.

Attitude may be defined differently depending on the concepts. It is a predisposition to respond in certain ways to the surroundings, either to certain individual or objects. Attitude is a readiness to respond consistently in positive or negative form of the object or situation (Eisenberg, Shea, Carlo, & Knight, 2014). Attitude is a way of reacting to stimuli from a person or a situation. The attitude will be very useful for someone, because it would result in expected behaviour. Attitude has three components: (a) cognitive, referring to knowledge, beliefs or thoughts that are based on the information associated with the object; (b) affective, which refers to the emotional dimension of attitude, namely the emotion associated with the object; and (c) behaviour that involves predisposition to react to the object (Brodie, Ilic, Juric, & Hollebeek, 2013).

Entrepreneurial attitudes are consistent with the traits of entrepreneurship (Meredith, 2005), namely: (a) confidence, beliefs, independence, individuality, and optimism; (b) orientation on task and result, need for achievement, orientation on profit, perseverance and fortitude, determination and hard work, strong impulse, being energetic and dynamic; (c) taking the risk and challenge, ability to take reasonable risks; (d) leadership, behavior as a leader along with others, responding to suggestions and criticisms; (e) originality, innovative and creative, and flexible; and (f) orientation to the future, foresight and perspective. These traits are the basis of entrepreneurial attitudes.

Motivation is important to understand why and how a person behaves. Motivation is needed to (a) observe and understand the behavior of individuals; (b) find and determine the causes of individual behaviour; and (c) calculate, monitor and change, as well as direct the individual behaviour (Mulyadi, 2011). Motivation is associated with (a) directing behavior, (b) the strength of the reaction after an employee has decided towards certain actions, and (c) the persistence of behaviour, or how long the person is willing to continue the particular behaviour in a certain way (Winardi, 2002). High motivation will determine the behavior of a person consciously. Thus, motivation can be defined as impetus of an individual to perform particular activities aimed at achieving certain goals. Motivation is divided into three groups: (a) content theories, (b) process theories, and (c) reinforcement theories (Hasibuan, 2003).

This study focuses on content theories, especially the achievement motive. In this sense, a person may have entrepreneurship motivation if he has certain motive, namely achievement motive. The achievement motive is a social value that emphasises the desire to achieve the best result to acquire personal satisfaction. The basic factor is the need to meet.

MATERIALS AND METHODS

The method of this study is quasi-experimental; in that, the experiment has treatments, outcome measures, and experimental units, but does not use random assignment to create the comparison to conclude the change as a result of the treatment. The pattern in this research is the one-group pre-test-post-test design. The design was administered to only one class, namely the students of Business Management Education, Faculty of Economics and Business Education, Class of 2013-A, who were registered for the Entrepreneurship Course. Both initial and final measurements were carried out through questionnaire and observation respectively before and after treatment. The scheme of the one group pre-test-post-test design is presented as follows:

Table 1
The scheme of the one group pre-test-post-test

Pre-Test	Treatment	Post-Test
O_1	X	O_2

Notes:
O_1 : Pre-test score (before treatment)
X : Treatment (apprenticeship learning model)
O_2 : Post-test score (after treatment)
$(O_1 - O_2)$: effect of treatment

The subject of this study was 40 students of Business Management Education, Faculty of Economics and Business Education, Class of 2013-A, who registered in the Entrepreneurship Course in academic year of 2014/2015. This study was conducted in the micro and small enterprises where the students were apprentices. Data was collected through questionnaire. Additionally, data was also obtained through the direct observation. Data collected was on the entrepreneurial attitude and motivation of students in two steps, namely first step (pre) and final step (post) using the same instrument.

The data analysis technique was aimed at testing hypothesis with paired sample t-test. Before that, the data must be normally distributed. To test the normality of data, one-sample Kolmogorov-Smirnov test was used. Data is distributed normally if it has significance value of r>0.05. It is found that the significant value of each variable respectively is 0.315 and 0.943 which are more than 0.05. Since the data is normally distributed, it can be analysed using paired sample t-test. The paired sample t-test is a method to test the hypothesis where the data is paired (not free). The characteristic most frequently encountered in the case of the pairs is that one group was given two different treatments. Although using the same group, researchers still obtained two kinds of sample data, i.e. data from the first treatment and data from the second treatment. Based on these explanations, the paired sample t-test is appropriate to prove the hypothesis.

To determine whether or not there is influence of apprenticeship model on entrepreneurial attitudes and motivation before and after the treatment, the difference test of two averages is used. To calculate the level of entrepreneurial attitudes and motivation of the students, the formula below is used:

$$t = \frac{\bar{d}}{\left(\frac{Sd}{\sqrt{n}}\right)}$$

in which:

t : value of t-statistic

$\bar{d}$: average difference of measurement 1 and 2

$\left(\frac{Sd}{\sqrt{n}}\right)$: standard deviation difference of measurement 1 and 2

n : sample size

The criteria of hypothesis testing are as follows:

If $t_{stat} > t_{critical}$, then H_o is rejected

If $t_{stat} < t_{critical}$, then H_o is accepted

or

if sig.>0,05, then H_o is accepted

if sig.<0,05, then H_o is rejected

RESULTS AND DISCUSSIONS

Results

Entrepreneurial attitude is shown by the scores of statements. The change in scores of entrepreneurial attitudes before and after the treatment of apprenticeship model explains the decrease or increase of the students' attitude, as depicted in the figure below:

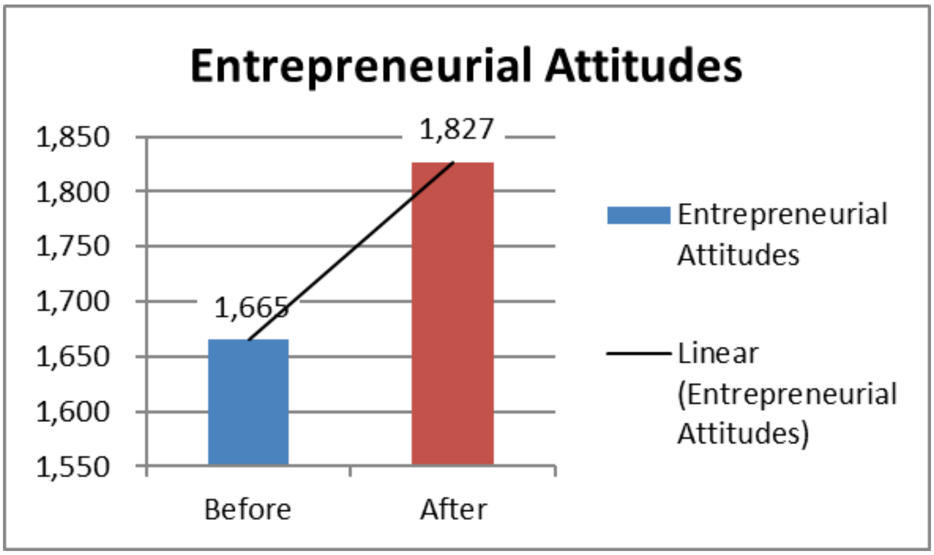

Figure 1. The score of entrepreneurial attitudes of students before and after the treatment of apprenticeship learning model
Source: Data Processed, 2015

Based on the figure above, it can be seen scores of entrepreneurial attitude have increased. This shows that the attitude of students to entrepreneurship is more positive after the treatment based on the apprenticeship learning model.

The description of each indicator that forms entrepreneurial attitudes of the students is presented in the following figure.

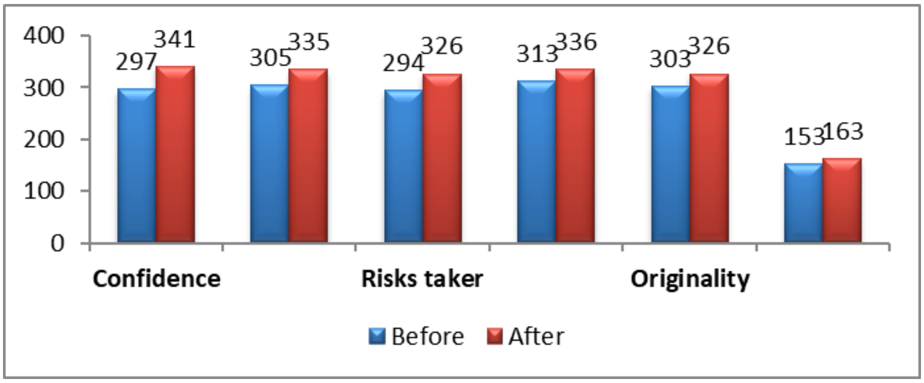

Figure 2. The score of students' entrepreneurial attitudes before and after the treatment of apprenticeship learning model based on each indicator
Source: Data Processed, 2015

Based on Figure 2, all indicators that form the entrepreneurial attitudes of students increased. The indicator that increased drastically is confidence (14.8%) and the least is future orientation (6.54%). It can be concluded that the apprenticeship learning model has an influence on the entrepreneurial attitudes of students.

The description of entrepreneurial motivation of students before and after the treatment of apprenticeship learning model is presented in Figure 3 below.

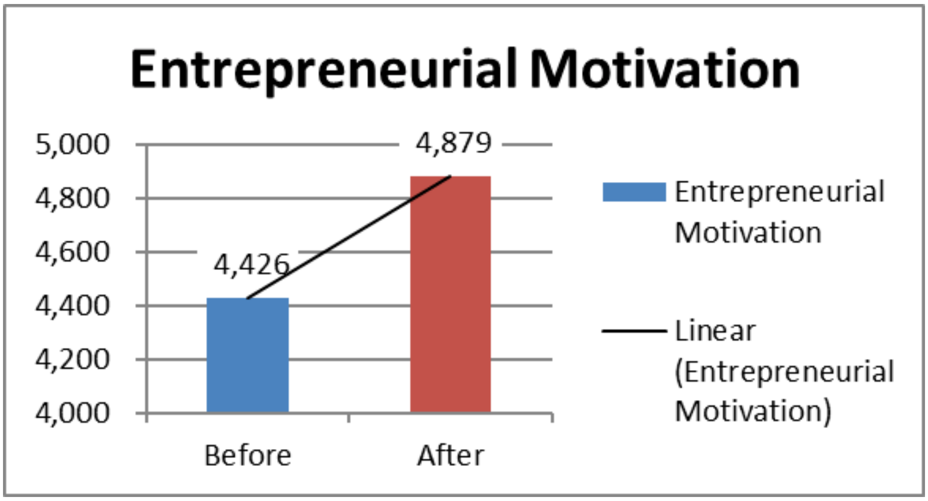

Figure 3. The score of entrepreneurial motivation of students before and after the treatment of apprenticeship learning model based on each indicator
Source: Data Processed, 2015

Based on the Figure 3, it can be seen that the entrepreneurial motivation scores of students have also increased. This shows that the motivation of students towards entrepreneurship is greater after the treatment of apprenticeship learning model. The description of each indicator that forms the entrepreneurial motivation of students is presented in the following figure.

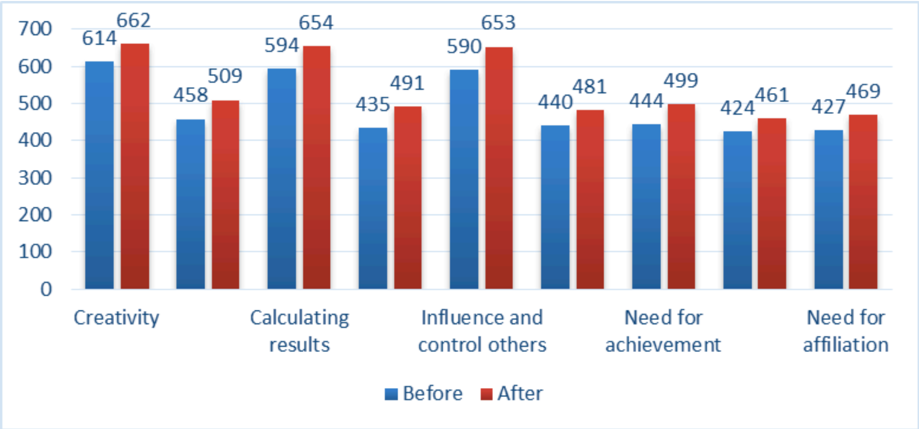

Figure 4. The score of students' entrepreneurial motivation on each indicator before and after the treatment of apprenticeship learning model
Source: Data Processed, 2015

Based on Figure 4, all indicators that form the entrepreneurial motivation of students increased. The most increasing indicator is the need for achievement (12.39%) and the least is creativity (7.82%). It can be concluded that the apprenticeship learning model has an influence on the entrepreneurial motivation of students.

The Influence of Apprenticeship Learning Model on Entrepreneurial Attitudes

In order to find out whether there is an influence of apprenticeship learning model on entrepreneurial attitudes, the difference test on the samples before and after the treatment was conducted. The result of the hypothesis testing is presented as follow.

Table 2
Result of hypothesis Testing #1

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair	Before	37.8000	40	4.66410	.73746
1	After	45.6750	40	4.72521	.74712

Paired Samples Test								
	Paired Differences							
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig (2-tailed)
				Lower	Upper			
Pair 1 Before-After	7.87500	5.77877	.91370	6.02686	9.72314	8.619	39	.000

Based on the calculation, the average score before treatment is 37.8 and after is 45.67. Using signification of 5% or 0.05, the value of t-statistic is 8.619. Therefore, it can be concluded that there is a significant difference in students' entrepreneurial attitudes before and after the treatment. In other words, the apprenticeship learning model has an influence on the entrepreneurial attitudes of student.

The Influence of Apprenticeship Learning Model on Entrepreneurial Motivation

To find out whether there is an influence of apprenticeship learning model on entrepreneurial motivation, the difference test on the samples before and after the treatment is conducted. The result of hypothesis testing is presented as below.

Table 3
Result of hypothesis Testing #2

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair	Before	110.6500	40	10.98846	1.73743
1	After	121.9750	40	7.67777	1.21396

Paired Samples Test								
	Paired Differences							
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig (2-tailed)
				Lower	Upper			
Pair 1 Before-After	11.32500	9.70167	1.53397	8.22225	14.42775	7.383	39	.000

Based on calculation, the average score before treatment is 110.65 and after is 121.97. Using signification of 5% or 0.05, the value of t-statistic is 7.383 so that it can be concluded that there is a significant difference in the entrepreneurial motivation of student before and after the treatment. Hence, the apprenticeship learning model has an influence on entrepreneurial motivation of student.

DISCUSSIONS

It is found that the apprenticeship learning model positively influences students' entrepreneurial attitudes. There is significant difference in students' entrepreneurial attitudes before and after the implementation of the model. This finding confirms that an attitude is the way of reacting to the stimuli from a person or a situation. The situation, in this case, is the apprenticeship learning model. In this sense, the entrepreneurship education is designed to change the orientation and attitude of learners through a process consisting of skills and knowledge which allows one to start and manage a business (Agu, 2006). Both skills and knowledge are likely to be acquired by the students through apprenticeship. The more effective the implementation of the apprenticeship model, the more positive the entrepreneurial attitudes of students are.

It is also found that the apprenticeship learning model has positive influence on students' entrepreneurial motivation. There is also a significant difference in students' entrepreneurial motivation before and after the implementation of apprenticeship learning model. This finding suggests that entrepreneurial motivation is positively affected by the apprenticeship learning model (Mulyadi, 2011). The more effective the implementation of the apprenticeship model, the higher the entrepreneurial motivation of students.

Motivation is important to understand why and how a person behaves. The behaviour is essentially the acts of someone driven by certain motivation to achieve particular set goals (Huang & Bargh, 2014). Motivation is not only demanded by one's internal needs, but also influenced by what he has learned.

In relation to the entrepreneurship, one can have an entrepreneurial motivation when he is driven by certain motive: the achievement motive. The achievement motive is a social value that emphasises the desire to get the best result in order to achieve personal satisfaction. The basic factor is the need to meet. This is in line with Dörnyei and Ushioda (2013) who suggest that motivation is a psychological process that reflects interaction between attitudes, needs, perceptions and decisions within a person.

Apprenticeship is just like training whose objective is to change the entrepreneurial attitude and drive the entrepreneurial motivation of a person. In particular, the goal of apprenticeship is to improve the entrepreneurial motivation of students, who are interested in becoming prospective entrepreneurs and may open opportunities to gain practical experience of entrepreneurship (Saeed, Yousafzai, Yani-De-Soriano, & Muffatto, 2015). In this sense, apprenticeship that is incorporated in the entrepreneurship course/learning will provide the real experience and applied knowledge for the students when they take up jobs.

CONCLUSION

Based on the discussion of research, the following conclusions are drawn:

There is a significant improvement of students' entrepreneurial attitudes, before and after the implementation of apprenticeship learning model. The significant difference means that the model has a significant influence on students' entrepreneurial attitudes.

There is also a significant improvement in students' entrepreneurial motivation, before and after the implementation of the model. The improvement suggests the model has a significantly positive influence on students' entrepreneurial motivation.

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Adoption of E-banking Services in South Tangerang Using Technology Acceptance Model (TAM) Approach

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ABSTRACT

This study is aimed at investigating the characteristics and acceptance of e-banking services in South Tangerang, based on the variables of Technology Acceptance Model (TAM). The aim is to increase the number the users of E-Banking Services in South Tangerang. Data was analysed using SPSS software. The results showed 51% of e-banking users here have used its services between six months and 1.5 years where the frequency of e-banking service usage per week is not less than ten times. About 31% of e-banking users of South Tangerang have made the largest transaction between IDR 1,501,000 - IDR 5,000,000. Since most of the e-banking users in South Tangerang work, 53% of them use the services during the day (08.01 - 15.00). Of all TAM variables, the variables which have the largest path coefficient value is behavioural intention, namely 0.320. It means that this variable has the greatest influence on actual use or adoption of e-banking service in South Tangerang.

Keywords: Behavioural intention, E-Banking adoption, path analysis, technology acceptance model

INTRODUCTION

There is stiff competition in the consumer banking sector due to increasing demand for ease and simplicity of banking procedures. In response, the banks have begun to offer various services such as phone banking. The service has now improved through e-banking. This new service has advantages over the previous service since it can be accessed anywhere using a mobile phone, PC, laptop or notebook. Besides, it can be accessed anytime as long as the service is available. E-banking makes it easy for everyone to check their, pay bills or

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transfer funds. E-banking also does not require attendance and transactions can be done quickly, precisely and safely. The advantage for customers is that they can make transactions quickly without time and distance limit, and e-banking transaction is relatively cheap. As one of the independent cities in Banten, South Tangerang, is a growth barometer for the region of Banten. Due to its population, South Tangerang is the second largest city in Banten Province after Tangerang City and the fifth largest in Jabodetabek area. The economic growth of South Tangerang will also be further boosted once the city is designated as one of the national activity centres in the national spatial plan.

According to Sharing Vision, the value of internet banking transactions in Indonesia has reached IDR3.642 trillion in 2012. The amount exceeded the value of ATM + debit transactions which stood at IDR3.476 trillion during the same period. Internet banking growth is driven by its users whose growth is quite rapid. According to a survey conducted by Sharing Vision in six major banks in Indonesia, the number of internet banking users reached 5.7 million people in 2012. In other words, 9% of internet users in Indonesia are internet banking users, and the figure is expected to increase corresponding with growth of internet users. The TAM (Technology Acceptance Model) was used to show how customers can receive and use an innovation. The TAM is very well known and has been used extensively in studies focusing on end users of technological innovation (MRI, 2016).

The focus of this study is on the adoption of e-banking services in South Tangerang using the Technology Acceptance Model (TAM). The following research questions will be addressed in this study: 1) What are the characteristics of e-banking users in South Tangerang?; 2) What are the e-banking services which have been used by customers in South Tangerang?; 3) What are the variables of TAM which affect the adoption of e-banking users in South Tangerang?; 4) Which TAM variable has the greatest impact on e-banking user adoption in South Tangerang?; 5) What is the strategy to increase the number of e-banking users related to TAM variables which has the biggest influence on the adoption of e-banking services?

LITERATURE REVIEW

A key to successful implementation of information and communication technology within companies is the willingness to receive and use these technologies among the users which can be examined using Technology Acceptance Model (TAM). This method was used in many studies focused on cell phone service, for example, Carlsson, Hyvönen, Repo and Walden (2005). The TAM is well known and has frequently been used in research focusing on user adoption of technology (Carlsson et al., 2005). According to Davis et al. (Wikipedia, 2016), TAM defines two things that affect the user's acceptance of the technology, namely perceived user's perception of ease of use and of using the technology (perceived usefulness). What are the reasons for accepting or rejecting an information technology? Previous studies have proposed two crucial factors (Davis, 2001). First, people tend to use or not to use an application based on their belief it will help their work get better. This first variable is called perceived usefulness. Second, although a potential user believes that a given app is useful, they may believe the system is hard to use. In addition to usefulness, the usability or benefit is theoretically influenced by perceived ease of use.

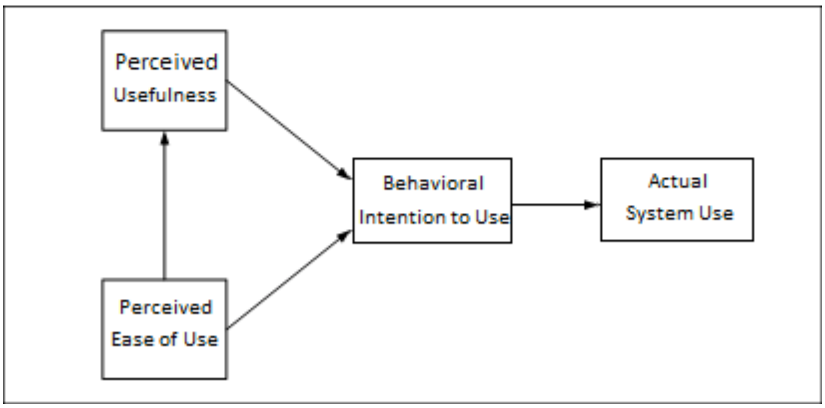

Figure 1. Technology Acceptance Model (TAM) Davis Version
Source: www.istheory.yorku.ca/Technologyacceptancemodel.html, 3 January 2007

The Technology Acceptance Model (TAM) presents a significant theoretical contribution to support understanding of the use of new technology and acceptance of it. As the previous researchers noted, the theory of TAM has one disadvantage: it does not look at social influences in the adoption process. To compensate for this deficiency, many researchers are making changes to TAM to suit their respective research objectives. Malhotra and Galletta (1999) used a modified TAM with TRA (Theory of Reasoned Action). The TRA describes the relationship between beliefs, attitudes, norms, intentions, and behaviours. According to TRA, attitudes and behaviours of a person are determined by the purpose in presenting these behaviours, and which are in turn directly influenced by individual attitudes (Dillon & Morris, 1996). The Theory of Planned Behavior (TPB) was used by Irawan, Hendayani and Widyani (2016) to study of the adoption of e-toll by residents of Bandung. The diagram below describes the relationship.

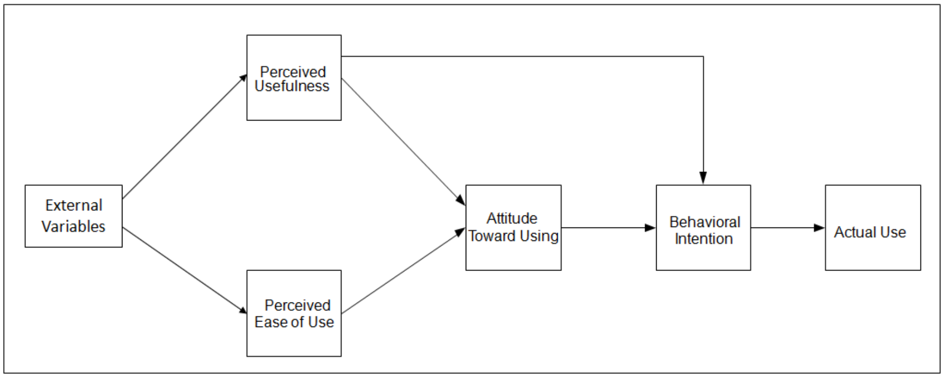

Figure 2. Technology Acceptance Model (TAM) Malhotra & Galletta Ver
Source: (Malhotra & Galletta, 1999)

The TAM model used in this study is a modified version and adapted to the Theory of Reasoned Action (TRA) and the variable of economic sacrifice. Considering that this research is about hi-tech service, it is assumed that there is benefit from adopting the new technology compared with the cost (Relative Advantage). This research does not use the model of external variable influence so it is assumed there is a relationship between perceived ease of use and perceived usefulness. Both of them, as well as the economic sacrifice, relate to the attitude toward using which directly affects the attitude of a technology user or behavioural intention. The behavioural intention, in addition to being influenced by the attitude toward using, is also influenced by perceived usefulness. And finally, the real user of technology is affected by his or her behavioural intention. The TAM as applied is described as below:

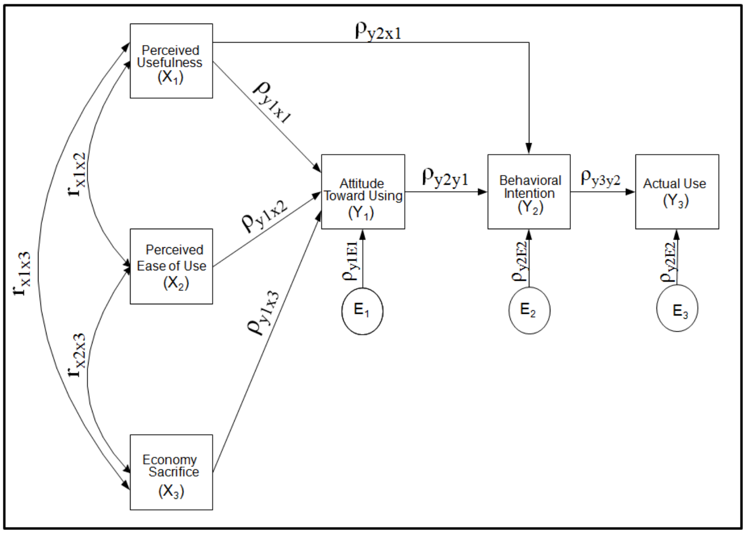

Figure 3. *Technology Acceptance Model* (TAM)
Source: Data Processed

The following hypotheses is proposed:

- There is a correlational relationship between perceived usefulness and perceived ease of use.
- There is a correlational relationship between perceived usefulness and economic sacrifice.
- There is a correlational relationship between perceived ease of use and economic sacrifice.
- Perceived usefulness, perceived ease of use and economic sacrifice significantly influence attitude toward using.
- Attitude toward using and perceived usefulness significantly influence behavior intention.
- Behavioural intention significantly affects actual use.

Structural equations:

$Y1 = \rho y1x1.X1 + \rho y1x2.X2 + \rho y1\varepsilon1$

$Y2 = \rho y2x1.X1 + \rho y2y1.Y1 + \rho y2\varepsilon2$

$Y3 = \rho y3y2.Y2 + \rho y3\varepsilon3$

MATERIALS AND METHODS

This is a quantitative research which used a survey questionnaire method to test the hypotheses and explain the causal relationship. Operationalisation of variables used in this research instrument is the Technology Acceptance Model as shown in Figure 3 above. Primary data is obtained from the responses and secondary data in the form of literature review. The Likert and Ordinal scale was used to measure the responses because according to Cooper and Schindler (2006); Sekaran (2006); Riduwan and Kuncoro (2007), this scale measures one's attitude towards something, which, in this case, is the e-banking service. A total of 100 respondents were recruited for this study using the Bernoulli formula. A set of 120 questionnaires were distributed e-banking service users in South Tangerang using the Convenience Sampling technique. Path analysis was used to analyse data.

Population refers to the entire group of people, events, or interests that are a subject of investigation (Sekaran, 2006). The population in this study is all e-banking users in South Tangerang, who fulfilled the following criteria: 1) Banking customers domiciled in South Tangerang; 2) Banking customers who have registered themselves as the users of the e - banking facility; 3) Banking customers who have been actively using e-banking facility for at least six months.

This study used the level of accuracy (α – 5%) at 95% confidence level so that the value obtained Z = 1.96. The error rate is set at 10%. Meanwhile, the probability of the questionnaire being correct (acceptable) or rejected (false) is 0.5. By using the above equation, it is then shown:

$$n \geq \frac{[1{,}96]^2\, 0{,}5.0{,}5}{0{,}1^2}$$

$$n \geq \frac{[3{,}8416]0{,}25}{0{,}01}$$

$$n \geq \frac{0{,}9604}{0{,}01}$$

$$n \geq 96{,}04 \approx 100$$

The minimum sample for this research is 100. This analysis will be used to test the amount of contribution directed by the path coefficients on each path diagram to show the causal relationship between variables X1 and X2 to Y1, Y2, and Y3. The correlation between Perceived Usefulness (X1) and Perceived Ease of Use (X2) to Attitude Toward Using (Y1), Behavior Intention (Y2) and Actual Use (Y3) are analysed using multiple linear regression which is the basis for path coefficient calculation.

RESULTS AND DISCUSSIONS

A total of 58.8% of respondents were male aged between 31 and 42 years. The majority of respondents (48 %) have jobs and 35.3% of them have an income ranging from IDR 5,001,000 to IDR 10,000,000. About 73.5% of the respondents used Telkomsel operators when conducting their e-banking. The characteristics of e-banking users in South Tangerang city are shown in Table 1 below:

Table 1
Characteristics of use of e-banking services

Item		%
Frequency of use per week	≤ 10	59.8
Max number of transactions nominal	IDR 1,501,000 – IDR 5,000,000	30.4
Location usage	Outdoor activities	52.9
Time usage	08.00 a.m.– 03.00 p.m.	52
Transaction type	Individual transaction	75.5
Destination of bank transfer	Transfer between accounts within the same bank	53.9
Destination of the furthest transaction	Inter-provinces	63.70

Source: Data processed

The results showed that 102 respondents have used the balance information service. Other services used by the respondents are inter-account transfer (91 respondents) and reload services (71 respondents). None used information seeking service, commerce for mutual funds, commerce shares, and other commerce. The inadequate use of the type of services offered by e-banking led to the banks to focus only on essential services such as balance, transfer, credit and other information so that there are some types of services that have never been used by e-banking users in South Tangerang. Additionally, the adoption of e-services offered by banks is still low. This is not good for the development and adoption of e-banking services in the future and therefore, banks must intensify their promotional activities, socialisation, and education for customers, especially for those who have registered as e-banking users in order to increase customer awareness of e-banking services. In addition, if the use of e-banking services increases, its adoption rate will also increase.

Path Analysis was used to analyse the influence of TAM variables to describe the adoption of e-banking services in South Tangerang city. The table below summarises the path analysis:

Table 2
Summary of path analysis of e-banking services

Influence of Variables	Path Coefficient (Beta)	Results	Coefficient of Determination	Other Variable Coefficients
X1 → Y1	0.313	Reject H_o	0.372	0.678 or 0.823^2
X2 → Y1	0.225	Reject H_o		
X3 → Y1	0.218	Reject H_o		
X1 → Y2	0.249	Reject H_o	0.176	0.824
Y1 → Y2	0.229	Reject H_o		
Y2 → Y3	0.320	Reject H_o	0.102	0.898

Source: Data processed

The result of the calculation gives the following equations:

- Structure 1 Equation:

  $Y1 = \rho_{y1x1}.X_1 + \rho_{y1x2}.X_2 + \rho_{y1x3}.X_3 + \rho_{y1}\varepsilon_1.\ \varepsilon_1; R_{square}$

  $Y1 = 0{,}313.X_1 + 0{,}225.X_2 +0{,}218.X_3 + 0{,}678\varepsilon_1; R_{square} = 0{,}372$

- Structure 2 Equation

  $Y2 = \rho_{y2x1}.X_1 + \rho y_{2y1}.Y_1 + \rho_{y2\varepsilon2}; R_{square}$

  $Y2 = 0{,}249.X1 +0{,}229.Y_1 + 0{,}824\varepsilon_2; R_{square} = 0{,}176$

- Structure 3 Equation

  $Y3 = \rho_{y3y2}.Y_2 + \rho_{y3}\varepsilon 3\ ; R_{square}$

  $Y3 = 0{,}320.Y_2 + 0{,}898\varepsilon_3; R_{square} = 0{,}102$

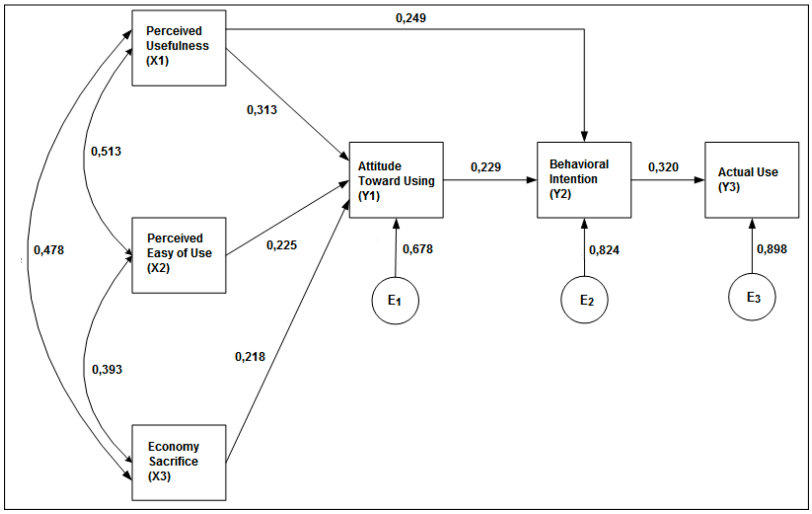

Figure 4. Path analysis diagram
Source: Data processed

The adoption and usefulness of mobile banking (e-banking) from the point of view of technology acceptance by the users, and the model for studying the acceptability of the technology called Technology Acceptance Model (TAM) is the focus of this study. According to Teo and Pok, this model is one of the popular approaches used in research in Information Systems or Technology Adoption (Carlsson et al., 2005, p. 10). The TAM variables used in this study are Perceived Usefulness (X1), Perceived Ease of Used (X2), Economic Sacrifice (X3), Attitude Toward Using (Y1), Behavioural Intention (Y2), and Actual Use (Y3). To measure the influence of one variable on others, the researchers used the Path Analysis Technique. This technique will be used in testing the contribution shown by the path coefficient on each path diagram of the causal relationship between variables X1, X2, X3 to Y1 and Y2 and their impact on Y3. Correlation and regression analysis is the basis of path coefficient calculation using SPSS program for Windows. Al Rashid in Sitepu (Riduwan & Kuncoro, 2007) stated that social research does not merely express the relationship variable as a statistical translation of the relationship between natural variables, but reveals causal relationships between the variables.

An important point of perceived ease of use is that this variable has been supported by the design of a service. Most of the designs or format of the current mobile service have made it easier for users, but other services resulting from technological developments should still promote the use of such services (Carlsson, et al., 2005). Carlsson et al. (2005) stated that the development of technology could give people a better experience. The TAM supports the relationship between perceived ease of use and attitude towards using. The coefficient for perceived ease of use is 0.225 which means that the perceived ease of use variable simultaneously affects attitude toward using (from the rejection of Ho) but the value of the effect is 0.225. Banks should be able to communicate and educate e-banking users and non-e-banking users to improve the positive impacts of e-banking users to increase the frequency of use of e-banking services.

Users are charged a small fee for use of e-banking service. This cost consists of two types - financial and non-financial. However, these costs should not be burdensome. Therefore, the banks should lower the cost of e-banking services (evaluative effect) to encourage its usage.

The benefit gained in TAM is called perceived usefulness, while the sacrifice is called economic sacrifice. Both of these variables are significant and simultaneous with attitude toward using in TAM. The value of the relationship based on path analysis is 0.313 and 0.218. Perceived usefulness is not only related to attitude toward using. In the TAM model, we assume that perceived usefulness and attitude toward using have a causal relationship with the behavioural intention or individual purpose to show the behavior of e-banking users. From the result of hypothesis test conducted in the analysis of sub-structure-2, there is a significant and simultaneous relationship between perceived usefulness and attitude toward using with behavioural intention at 0.249 and 0.229 respectively. Malhotra and Galletta (1999) found adoption of new information technology such as e-commerce applications and m-commerce is determined by user's attitude. Therefore, to optimise the positive feelings of e-banking users in South Tangerang city in using e-banking (effect of evaluation or evaluative effect), the banks must increase the benefits of using e-banking. Banks may increase the variety of their e-banking services. However, they must also be able to socialise these services and educate the people who have not used e-banking services.

The final variable of TAM used in this study is actual use variable which is the real use of e-banking service by banking customer, or in other words, it is an adoption toward e-banking service. In this TAM, it is described that behavioural intention has a direct causal relationship with actual use. And from the result of analysis of sub-structure-3, it is found that there is a significant and simultaneous relationship of behavioural intention variable towards actual use variable with path coefficient value of 0.320. Therefore, to optimize the use of e-banking by South Tangerang e-banking users (frequency of usage and frequency of usage time), the banks should make efforts to increase the frequency of using the service. When a user feels that his goal of using e-banking is achieved, the frequency of e-banking usage will also increase.

CONCLUSION

Based on the results, 51% of e-banking users in South Tangerang city have been using e-banking for six months to 1.5 years where the frequency of use of e-banking services per-week is not less than 10 times. In terms of the maximum amount of nominal transactions, 31% have made the largest transactions amounting to IDR 1,501,000 – IDR 5,000,000. As most of e-banking users work, they conduct their banking activities outside during the day (from 08.01 a.m. to 03.00 p.m.). Personal transaction is most used by e-banking users between accounts within the same bank, and the furthest destination of e-banking user in South Tangerang city is interprovincial transactions.

All respondents used personal services, such as balance information service.

Based on the analysis, it is found the adoption of e-banking services in South Tangerang city is influenced by all TAM (Technology Acceptance Model) variables, such as perceived usefulness, perceived ease of use, economic sacrifice, and attitude toward using, behaviour intention, and actual use.

Behavioural intention had the largest path coefficient value, namely 0.320 which means that this variable has the greatest influence on actual use or adoption of e-banking service in South Tangerang city.

Behavioural Intention has two indicators communicating the technology to others and the use of e-banking in every user action. About 60% of e-banking users are happy and have no difficulty in explaining e-banking services to others, and they also use e-banking either in jobs or personal activities. Strategies to maximise the use of e-banking services in South Tangerang city are based on Behavioural Intention variable which is focused on education to users and non-users of e-banking to increase user knowledge of e-banking services and invite non-users to use e-banking services. The definition of consumer education is the value of education both in economic understanding about money and in moral understanding about social and environmental responsibility (Samuel & Foedjiawati, 2005, p. 3). Socialisation is a process of planting or transferring habits or values and rules from one generation to another in a group or society. Some sociologists use socialisation as a role theory because the process of socialisation imparts rules. In this case, the rules are information about e-banking and the stages that should be taken in using e-banking. From the indicators on Behavioural Intention variables, it can be concluded that someone who has been familiar with e-banking will not hesitate to tell others about e-banking services. This will increase the adoption of e-banking services. This can be seen from the causal relationship between Behavioural Intention against Actual Use.

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Social Media Perceptions on In-Group and Out-of-Group eWOM Interactions among Adolescents in Jakarta

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ABSTRACT

This research aims to identify the relationship between motivation drivers, social media perception and eWOM behaviour. A social network paradigm and a human-computer interaction concept is used to predict the type of eWOM, whether as an in-group or out-of-group. The study used a cross-sectional quantitative survey to test the hypotheses. A convenient sampling method was used to recruit 158 respondents, aged between 18 and 25 years, who were social media users. Data was analysed using a regression analysis. Mood enhancement was found as a significant predictor for experiential learning and escapism. Escapism in turn was found to be a significant predictor for social interactions. Both experiential learning and social interactions were discovered to be significant predictors for all social media perceptions: openness, participation, connectedness, conversationality, and commonality. Only social media perceptions, openness, and connectedness were found to be significant predictors for eWOM, for in-group and out-of-group. Social media motivation drivers that promote learning and social interactions can be used to make social media users proactive in engaging with the brand. The underlying social media motivation drivers create social media perceptions that demand the need for social media to be creative, adaptable, and sociable.

Keywords: Electronic word of mouth, in-group and out-of-group, motivation drivers, social media, social network

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INTRODUCTION

In the era of digital connectivity, the Internet has become an essential medium for most forms of communication. The traditional distant communication is being replaced by

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internet-based communication. The social media platforms which function as the main interface for internet-based communication have become heavily used. Social media users create a perception about social media as part of their process to understand it. As it is directed to fulfil certain desires, these perceptions also influence the behaviour of using social media users.

Social Network

The term network refers to a set of factors with lines of connections (Borgatti & Foster, 2003). In this context, a social network is a concept where social structures are networks, where individuals are dots that are inter-connected by lines of relationships.

The social network paradigm is useful in explaining eWOM, especially because strong ties are often established for in-group communication, while weak ties connect different group clusters through out-of-group communication (Abrantes, Seabra, Lages, & Jayawardhena, 2013). This is useful in explaining the pattern of spread of information pattern in whole populations.

Social Media

Social media platforms are diverse and fast evolving making it hard to find a consensus on its definition (Chan-Olmsted, Cho, & Lee, 2013). Mayfield (2008) proposed five social media characteristics - participation, openness, conversation, community, and connectedness. These characteristics were used by Chan-Olmsted et al. (2013) to create a construct of the perception of social media. Chan-Olmsted et al. (2013) measurement tool for gauging social media perception is adopted in this study.

E-WOM

Marketing has been integrating eWOM as part of customer relationship management (CRM). Social networks (SNs) have asynchronous and connective characteristics that enable the influence of weak ties with external communities (Chu & Kim, 2011). As a part of SNs, eWOM are persistent and accessible and thereby highly effective compared with traditional communication (King, Racherla, & Bush, 2014). Therefore, it is important to study social groups in the digital world, something rarely discussed in literature as many are focused on the well accepted influence of strong ties.

Problem Statement

The importance of electronic word-of-mouth or eWOM, as a strong marketing tool, has been well acknowledged. However, there are few studies on the mechanism of how the differing social media platforms influence eWOM behaviour. Although previous studies have focused on the gratification of one kind of social media, research on comparing different social media is still limited (Gan & Wang, 2015). The current study focuses on users' demographics. The social media platforms, as the medium of digital social communication, certainly are influential in the behaviour of eWOM (Gunawan, Diana, Muchardie, & Sitinjak, 2016). Digital programs influence behaviour through the interactions between its interface and the psychological factors of the users (Dix, Finlay, Abowad, & Beale, 2005). The focus group discussion conducted in this research also indicates different uses of social media platforms based on the interactions of in-group and out-of-group, as particular social media can be perceived as more convenient or intimate for certain social interactions.

Research Questions

The usage of the social network paradigm is essential in designing a marketing plan to create the desired eWOM type, between in-group and out-of-group. This research examines the relationship between the social network concept and social media platforms; hence several research questions were raised: 1) Does experiential learning as a social media usage driver influence the perceptions of social media platforms? 2) Does social interaction as the social media usage driver influence the perceptions of social media platforms? 3) Which social media perceptions significantly contribute to in-group eWOM? 4) Which social media perceptions significantly contribute to out-of-group eWOM?

LITERATURE REVIEW

Social Media Usage Motivation

One study adopted the uses and the gratification theory in its construct development (Abrantes et al., 2013). This is applicable because the Internet can be considered as a form of media.

Mood Enhancement

Humans have a certain optimal level of arousal that induces pleasure, while over-arousal and under-arousal is unpleasant (Litman, 2005). Under-arousal is often referred to as an emotional state of boredom. This is the reason that information seeking behaviour is part of human nature. A learning experience has intrinsic incentives, driving the general behaviour of learning. Information seeking is also part of the reason that drive people to use social media (Gangadharbatla, 2009). Social media facilitates the process of information seeking by giving access to information held by other people. This finding is supported by Parker and Plank (2000), who identified the desire for learning as a motivation of Internet usage. This justifies experiential learning as a mechanism to enhance the mood that drives social media usage. Therefore, the following hypothesis is proposed:

H1: Social media's use for mood enhancement is positively related to experiential learning.

On the other hand, over-arousal will create a motivation to decrease the source of stimulation. Thus, this will become an avoidance behavior or escapism. Escapism is a psychological state where people escape from their existing concerns and responsibilities (Mathwick & Rigdon, 2004). Meanwhile, the Internet as a media has the gratification of relaxation (Parker & Plank, 2000). Stafford, Stafford and Schkade (2004) identified the internet as having content gratification for its entertainment value. Based on its uses and the gratification theory, users who need escapism will use the internet to obtain gratification. Hence, the following hypothesis is developed:

H2: Social media's use for mood enhancement is positively related to escapism.

Escapism

Maintaining relationships through social interactions is part of the driver of social media usage (Gangadharbatla, 2009). Curras-Perez, Ruiz-Mafe and Sanz-Blas (2014) reported networks are seen by social media users as a diversion and a source of fun. Parker and Plank (2000) also identified the Internet as being used to fulfil the need for socialisation. The existence of the Internet as a form of escapism allows users to extend the social networks of the users (DiMaggio, Hargittai, Neuman, & Robinson, 2001). Therefore, the following hypothesis is developed:

H3: Social media's use for escapism is positively related to social interactions.

Experiential Learning

Social media facilitates social learning by observing others and via active feedback between users (Veletsianos & Navarrete, 2012), both of which correspond with reflective observation and abstract conceptualisation in experiential learning. A social media platform is a medium of experiential learning. These perceptions are meta-models of the users regarding the social media platform. Consequently, these meta-models are subjective perceptions about the social media based on an evaluation of the user's experience of the users. Hence, the following hypothesis is proposed:

H4: Social media's use for experiential learning is positively related to social media's perception of openness, participation, connectedness, conversationality, and commonality.

Social Interactions

The social interactions that occur in the platform can lead to certain perceptions of the social media through the transfer of attributions. Fischer and Reuber (2010) argued that social interactions via social media can trigger effectual thinking, which influences decision making under uncertainty. Thus, the following hypothesis is proposed:

H5: Social media's use for social interactions is positively related to its perception of openness, participation, connectedness, conversationality, and commonality.

Social Media's Perception and E-WOM

As an Interface of users' experiences, social media limits the behaviours of its users through its functionality.

E-WOM greatly influences purchasing decisions and is more effective than traditional marketing efforts (Sweeney, Soutar, & Mazzarol, 2008). In a social network, the actors are people, where their ties represent their social behaviours and relationships. There are many types of ties, such as target of trust, mutual conflict, or perceived intimacy. This allows for the classification of the ties based on their strength, strong and weak ties (Abrantes et al., 2013). A combination of strong ties weak ties in a social network is important to explain the diffusion of information between members of social groups and further in-between social groups, making information spread to the whole social segment (Abrantes et al., 2013; Gravanotter, 1973). From a marketing perspective, social ties can be used to explain its influence in WOM referral behaviour (Steffes & Burgee, 2009).

The-WOM can be categorised into two types: in-group e-WOM and out-of-group e-WOM. Strong ties are often created within an in-group. This includes people with immediate frequent contact such as family members, close friends, and colleagues (Abrantes et al., 2013; Gravanotter 1973). A strong relationship is required for participation in a social network because it necessitates a high commitment (Dholakia, Bagozzi, & Pearo, 2004). Thelwall (2009) argues that one of the purposes of social networking sites is to revive existing relationships in real life through the digital world. This indicates communication within an in-group might be the main form of online communication.

On the other hand, weak ties happen with people who are rarely contacted, indicating out-of-group communication (Abrantes et al., 2013). Granovetter (1976) highlighted the importance of weak ties in offering access to information and resources because of the different backgrounds of social actors.

Openness

Social media is open to feedback and participation with a lack of barriers to access and use its content (Mayfield, 2008). Myers, Knox, Pawlwski and Ropog (1999) pointed out that open communication can become ego-threatening, making the communication differ between the type of audience, dependent on the purpose and strength of the relationship. Hence, the following hypothesis is developed:

H6: The social media perception of openness is positively related to in-group and out-group eWOM.

Participation

According to Mayfield (2008), contributions and feedback are encouraged in social media that blur the distinction between the media and audience. He further argued that a strong relationship is necessary for participation because of its requirement of involvement. Therefore, the following hypothesis is developed:

H7: The social media perception of participation is positively related to in-group and out-of-group eWOM.

Connectedness

A social group in real life also transfers itself to the digital world, and many social media groups offer features to find those existing social contacts. Some social media are focused on the networking functionality, which make them dependent on it (Thelwall, 2009). This feature is also in accordance with users' motivation to use social media as a means for maintaining or improving social relationships (Dholakia et al., 2004). Thus, it can be hypothesised that:

H8: The social media perception of connectedness is positively related to in-group and out-of-group eWOM.

Conversationality

Social media has the characteristic of two-way communication that is different from traditional media (Mayfield, 2008). The high Internet connectivity allows users to connect and interact with multiple people that is physically inconvenient for interactions through other methods of communication. Henceforth, it can be hypothesised that:

H9: The social media perception of conversationality is positively related to in-group and out-of-group eWOM.

Commonality

Users with a common interest become a community because social media facilitate its quick formation and effective communication (Mayfield, 2008). Commonality or a shared background is often the basis of relationships and therefore, social interactions. People with similar backgrounds often have clusters of social groups that easily become in-groups. Thus, the following hypothesis is proposed:

H10: The social media perception of commonality is positively related to in-group and out-of-group eWOM.

Research Design

This is a descriptive research using a quantitative method. The survey was conducted for two weeks, from 16th December 2016 until 29th December 2016. The questionnaire consisted of 56 items adapted from original studies (Abrantes et al., 2013; Chan-Olmsted et al., 2013). The respondents of this research are university students in Jakarta, aged between 18 and 25 years.

The self-administered questionnaire was distributed both digitally and physically through convenient sampling. The platform of Google Docs for Google Form was used to post the questionnaire online. A total of 195 responses was collected - 120 coming from physical questionnaires and 75 from online questionnaires.

RESULTS AND DISCUSSION

Results of data analysis are shown in Tables 1 and 2.

Table 1
Simple linear regression

Dependent Variable	Independent Variable	R^2	β	Sig.	Acceptable Alpha	Conclusion
Experiential learning	Constant	0.267	2.301	0.000	0.05	-
	Mood enhancement		0.527	0.000		H1: Supported
Escapism	Constant	0.131	2.018	0.000		-
	Mood enhancement		0.495	0.000		H2: Supported
Social interaction	Constant	0.225	2.410	0.000		-
	Escapism		0.449	0.000		H3: Supported

Table 2
Multiple linear regressions

Dependent Variable	Independent Variable	R^2	β	Sig.	Acceptable Alpha	Conclusion
Openness	Constant	0.283	1.779	0.000	0.05	-
	Experiential Learning		0.318	0.000		H4a: Supported
	Social Interaction		0.282	0.000		H5a: Supported
Participation	Constant	0.305	1.308	0.002		-
	Experiential Learning		0.293	0.001		H4b: Supported
	Social Interaction		0.393	0.000		H5b: Supported
Connectedness	Constant	0.481	1.496	0.000		-
	Experiential Learning		0.136	0.043		H4c: Supported
	Social Interaction		0.535	0.000		H5c: Supported
Conversationality	Constant	0.387	1.516	0.000		-
	Experiential Learning		0.273	0.000		H4d: Supported
	Social Interaction		0.366	0.000		H5d: Supported
Commonality	Constant	0.365	1.720	0.000		-
	Experiential Learning		0.226	0.002		H4e: Supported
	Social Interaction		0.387	0.000		H5e: Supported

Table 2 *(continue)*

Dependent Variable	Independent Variable	R^2	β	Sig.	Acceptable Alpha	Conclusion
EWOM in-group	Constant	0.252	1.613	0.00	0.05	-
	Openness		0.286	0.016		H6a: Supported
	Participation		0.124	0.249		H7a: Not supported
	Connected-ness		0.383	0.001		H8a: Supported
	Conversationality		-0.259	0.105		H9a: Not supported
	Commonality		0.091	0.502		H10a: Not supported
EWOM out-of-group	Constant	0.356	1.148	0.003		-
	Openness		0.289	0.006		H6b: Supported
	Participation		0.187	0.052		H7b: Not supported
	Connected-ness		0.355	0.001		H8b: Supported
	Conversationality		-0.067	0.636		H9b: Not supported
	Commonality		-0.037	0.759		H10b: Not supported

Every hypothesis related to social media motivation was supported (H1-H3). The relationships between social media motivation drivers and the social media platforms were also all supported (H4 and H5). Meanwhile, the only relationships between social media perception and eWOM (in-group and out-of-group) were for social media perceptions of openness (H6) and connectedness (H8).

CONCLUSION

RQ 1: Does experiential learning via social media influence the perceptions of social media platforms?

Mood enhancement was found as a significant predictor for experiential learning. This suggests that users are motivated to seek experiential learning, because their hedonistic values will always seek to improve their mood, and experiential learning can fulfil that desire. This finding is also consistent with Abrantes et al. (2013).

The findings show that experiential learning contributes to all social media perceptions discussed: openness, participation, connectedness, conversationality, and commonality. This suggests that the experience of learning in social media affects the way users perceive social media.

RQ 2: Does social interaction influence the perceptions of social media platforms?

The findings suggest that significant relationships exist between escapism and mood enhancement. Hence, escapism can be seen as a means to enhance the mood of Internet users. Escapism was also found as a significant predictor of social interactions. Consequently, users will seek social interactions to enhance their moods. This also confirmed the result of previous research by Abrantes et al. (2013).

A multiple regression analysis for social interactions as a predictor for social media perceptions found it to be a significant predictor for them, which are openness, participation, connectedness, conversationality, and commonality. This suggests that the process of socially interacting with other users in social media affects the perception of social media. This can be important for social media platforms because the behaviour of some users can make other users also associate such behavior with the social media.

RQ 3: Which social media perceptions significantly contribute to in-group eWOM?

The social media perceptions found to be significant predictors of the eWOM in-group are openness and connectedness. The other perceptions of participation, conversationality, and commonality are not found to be significant in the research.

RQ 4: Which social media perceptions significantly contribute to out-of-group eWOM?

Similar with eWOM in-group, the social media perceptions that significantly contribute to eWOM out-of-group are openness and connectedness. This might suggest that social media users do not treat in-group and out-of-group in terms of eWOM behaviour.

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Brand Action for Environmental Sustainability: Is Brand A Hero or A Caregiver?

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ABSTRACT

The purpose of this study is to examine brand personality and its impact on the environment via social actions which in turn has an effect on brand attitude. A brand archetypal platform is used: hero and caregiver. A hero is depicted as a kindly-powerful, brave figure, who fights against evil, defends the weak and the needy with the hero emerging as an ultimate victor. Unlike a hero who is associated with violence, a caregiver has an image of tenderness and caring. This research is based on an experimental method designed to test perception of two company's cause-related marketing (CRM) programmes. Experimental stimulus is created in the form of reading that consists of text and images regarding the CRM programme. The result shows that brands are imaged as a hero and as a caregiver as well. Both archetypes are equally strong and perceived as the personality of a brand that performs CRM. Ultimately, these hero and caregiver brand personalities have positive effects on consumer attitudes toward CRM and brand.

Keywords: Brand personality, brand attitude, cause-related marketing, environment, hero and caregiver archetype

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INTRODUCTION

There has been a recent trend among companies to engage consumers to participate in their social movements (instead of their traditional focus on philanthropy). Consumers can participate in improving the social welfare of a community through the purchase of products. This is known as cause-related marketing. As an example, a brand of mineral water contributes to the improvement of access to drinking water for people in Nusa Tenggara Barat (NTB). The brand programme supports the government target to help people gain access to drinking water and improve the health of environmental.

Consumers assess the brand of being tough and brave and being able to overcome obstacles and survive in difficult times. Brands can assist in improving people's welfare by supporting government programmes. Nevertheless, the brand also tends to see destructive people as enemy, as those who destroy nature and life. Therefore, consumers look at the brand as a "hero" with altruistic motives and motivated by compassion and generosity to help others. Brands help people who are struggling to get clean water and to sustain life and health. However, they must deal with the risk that by helping others they may harm the brand. Considering these altruistic actions, consumers see the brand as a "caregiver".

Marketers create a story of the brand to attract consumers to be involved in their social actions (Barone, Miyazaki, & Taylor, 2000). Through promotions, product packaging, image and solicitation through social media, marketers establish brand personality in the minds of consumers and encourage them to be involved in their social actions. Without going to the location of people who need help, consumers can be engaged anywhere through a product purchase. Marketing activities which contribute a certain amount of revenue earned from customers for a particular cause is known as cause-related marketing/CRM (Varadarajan & Menon, 1988).

The success of CRM depends largely on how the company designs the CRM programme. Through a cause-related marketing programme, consumers will be attracted to the brand (Barone et al., 2000). Consumers are eager to know what happens to their donation from their purchase (Folse, Niedrich, & Grau, 2010). Customer's desire to contribute is also determined by how the company delivers the CRM message (Grau & Folse, 2007).

Aaker (1997) proposed the five dimensions (sincerity, excitement, competence, sophistication, and ruggedness) of human nature associated with brand personality traits. Long before Aaker proposed his Big 5 personality structure, Jung (1975) offered his thoughts on archetypes. Mark and Pearson (2001) meanwhile examined the concept of 12 archetypes of Jung that became the basis of the world's leading brands. Previous studies showed that by presenting a brand through a story, archetypal themes in the story can be recognised by consumers (Muniz, Woodside, & Sood, 2015). Human characteristics that appear in the brand are preferred by consumers, which in turn have a positive effect on consumers' attitudes toward the brand (Laksmidewi & Giovandru, 2016). Although many studies discuss brand personality, they have not related brand personality with brand social action for the environment.

Previous studies have examined variables that influence the implementation of corporate social responsibility. Ho, Ang and Tee (2015) assume that leadership styles affect CSR practices. Abdalla, Nabiha and Shahbudin (2014) argued that companies must have good financial and environmental performance. This study argues that action for the environment can demonstrate brand personality; therefore, brand action must be suitable with brand personality. There have been no studies thus far that linked brand personality with brand social action. This research attempts to fill the gap by discovering how consumers perceive the personality of a brand that performs social action to benefit the environment. The current study proposes archetypal themes that are suitable as brand personality in relation to tackling environmental problems.

This study aims to examine brand personality in the minds of consumers who are aware brand actions help society. In order to understand if the brand personality can engage consumers in social activities, a brand archetypal platform is used: the hero and the caregiver. Using the survey method by Pearson-Marr Archetype Indicator/ PMAI (McPeek, 2008), we examine the dominant archetype in the minds of consumers and whether this archetype has positive effect on their brand attitude. Consumer attitudes toward cause-related marketing is considered a mediating variable. Theoretical and managerial implication of this research are also discussed in the paper.

LITERATURE REVIEW

Brand Personality

Consumers have a tendency to personify a brand (Guthrie, 1995), for instance, by referring to the brand as being cool, patient, and helpful among others etc. The tendency to personify is actually not only towards a brand, but people have a tendency to attribute human characteristics to all kinds of non-human objects. Epley, Waytz and Cacioppo (2007) termed this as anthropomorphism. Marketers take advantage of this anthropomorphic tendency by using celebrity or cartoon characters to promote the brand so that the brand is remembered as figures. The more similar the product is depicted in the appearance, behaviour and human personality, the more consumers anthropomorphise the product, which then positively affects the intention to buy the product (Laksmidewi, Susianto, & Afiff, 2017a). Marketers also deliberately associate the brand with human traits or brand personality. Brand personality is human characteristics that are associated with a brand (Aaker, 1997). Furthermore, Aaker (1997) stated that by using a variety of different characteristics for different product categories, a brand personality dimensions which include sincerity, excitement, competence, sophistication and ruggedness will be created. In short, by giving human characteristics to the brand, marketers will ensure consumers find similarities between the brand and themselves, so it will establish brand-consumer relationship (Fournier, 1998).

The archetype framework is widely used in advertisements, and its applications fall into the realm of brand personality (Bechter, Farinelli, Daniel, & Frey, 2016). Jung (1975) proposed that the experience of past generations affects the minds and behaviour of people in the present. An archetype is collective unconscious, where there is a repeating pattern and is universal (Jung, 1975). Stories offer pleasure to the consumer, so that the message becomes easier to understand (Woodside, 2010). Muniz et al. (2015) used two archetypes - a sage and a creator - in stories about brands. Brand story using sage and creator archetype is able to fit to consumer's life story (Muniz et al., 2015). This is because the archetype reflects various aspects of human personality (Jung, 1975). Mark and Pearson (2001) examined various brands in the US and found these brands contain archetypal story. There are twelve common archetypes: the hero, creator, sage, innocent, jester, explorer, lover, caregiver, outlaw, magician, ruler, and regular guy.

The Hero Archetype

According to Pearson (1998) in Laksmidewi, Susianto and Afiff (2017b), archetype is a psychological structure in the form of symbols, images, and themes. Archetypes are common to all cultures. We experience the story archetypes within us. Manifestation of the archetype may vary from person to person, influenced by personality, culture, and history. Archetype affects individuals, groups, and organisations, and determines our view of how we see ourselves, the environment, and the world. Advertisements with hero figures are able to convince the consumer that the product is good, and have a positive effect on the perception of product efficacy, which then positively affects purchase intention (Laksmidewi et al., 2017b).

The spirit of a hero is marked by his sacrifice. He or she is smart, a martyr, ruler, and noble. These are the hero's main characteristics. His heroic struggle leads to conflict within his family and a world that he does not know, and he challenges the world (Campbell, 2004). His main contribution is the sacrifice he makes to achieve his goals (Mark & Pearson, 2001). This value is embodied in environmental fighters, who often do not get support from people who damage the environment and the producers who ignore sustainability.

The hero archetype is well known in every culture, including in Indonesia. The story of the archetypal hero has been passed down from generation to generation. This kindly powerful figure defends the weak and needy. The hero wins the battle against his enemies (Campbell, 2004). Hero archetype is also used in Indonesian advertising, such as medicinal and household products. For example, the battle between the hero character Woods against cough and Mr. Muscle's fight against dirt describe t how the heroes the problem. The hero character is a symbol of the product.

The Caregiver Archetype

Bechter et al. (2016) found that archetype framework is related to dimensions of brand personality which were proposed by Aaker. They match Jung's archetype and Aaker's brand personality trait. Table 1 shows the relevance of hero and caregiver archetypes with brand personality adapted from Bechter et al. (2016).

Table 1
Hero- caregiver archetype and brand personality

Archetype	Archetype Manifestation	Personality Trait	Brand Personality Dimension
Caregiver	Stability	Embraced	Sincerity
	Belonging	Welcoming	Sincerity
		Genuine	Sincerity
Hero	Mastery	Adventure	Excitement
		Genuine	Sincerity
		Tough	Ruggedness

Source: Bechter et al. (2016)

Caregivers give love and support to everyone. They have an altruistic, selfless, loving, empathetic and generous nature. They believe in nurturing, keep people out of danger, and take care of others. Their principle is to do something for others (Mark & Pearson, 2001). A brand that uses caregiver archetypes embodies the value that they empathise with (Mark & Pearson, 2001).

Caregiver archetypes in advertising in Indonesia are dominated by health care and household products, which represents a loving mother, caring for the family and her child. Brands of family care products such as Dettol, Lifebuoy, as well as Zwitsal baby products show the value of caregivers in their advertisements.

Cause-Related Marketing (CRM)

Varadarajan and Menon (1988) described CRM as a marketing activity by contributing a certain amount of revenue earned from customers for a particular problem. This is a way for the company to be respectable by doing good. The benefits of CRM according to Endacott (2004) is a mutually beneficial for businesses, beneficiaries and consumers. Consumers have the opportunity to help solve the cause. Causes of cause-related marketing programs will benefit companies in the form of publicity that can increase product sales and corporate image.

Sen and Bhattacharya (2001) revealed a positive effect of CRM that has an impact on increasing consumer perceptions of corporate image. According to Van den Brink, Odekerken-Schröder and Pauwels (2006), CRM have a positive effect on building brand loyalty. Consumer brand loyalty was higher if the company has high commitment to CRM programme and consumers have low involvement with the product. Furthermore, Barone et al. (2000) found that consumers are more interested in companies that engage in CRM when offering new products. However, Webb and Mohr (1998) argued that CRM programmes by companies do not always have a positive effect on consumers' purchasing behaviour.

Cause-related marketing can improve product marketing activities depending on the company's right strategy and tactics. The company determines strategic and tactical cause-related marketing through four approaches, namely congruence, duration, amount of investment and management involvement (Varadarajan & Menon, 1988).

MATERIALS AND METHODS

We conducted an experiment to test perception of two company's CRM programmes. Two big companies who have done cause-related marketing actions were selected. The products of the two companies are convenience products. Selection criteria: the company should be familiar to participants, and the product can be purchased by the participants, so that the participants as consumers can participate in CRM programme of the companies. Initials of the two companies are A and L; the former produces bottled mineral water while the latter produces soap. A and L have a CRM programme to donate clean water for communities in eastern Indonesia where consumers are actively engaged to participate through the purchase of products. An experimental stimulus in the form of reading was created that consists of text and images regarding the CRM program.

A total of 149 students, 73 of them males, from Universitas Katolik Indonesia Atma Jaya participated in the experiment and were randomly assigned to A and L CRM action. They were aged between 17 and 22. In the experiment, archetype perception of CRM action, attitude toward CRM, and brand attitude were measured. The perception instrument was adapted from a scale of PMAI (Pearson Marr Archetypes Indicator, Bechter et al., 2016; Hautala & Routamaa, 2008). Hero archetype instrument included 9 items ($\alpha = 0.732$) while caregiver archetype 10 items ($\alpha = 0.874$), and brand attitude had 4 items ($\alpha = 0.832$). All items used the scale of 1 (not at all noticeable) to 6 (very real). Attitudes toward CRM programmes were measured using instruments adapted from Grau and Folse (2007). For example: 1) A non-profit objective in a sustainable programme is important, 2) I support this programme, and 3) I will participate in donating for the community that experience water shortage. Attitude toward the brand was adapted from Garretson and Niedrich (2004), including statements of whether the participant likes/dislikes; happy/not happy; good/bad; positive/negative towards the brand.

RESULTS AND DISCUSSIONS

Archetype Indicators Validity

To ensure the validity of variables, especially the variables of hero archetype and caregiver archetype perception, confirmatory factor analysis was conducted. The confirmatory factor analysis results of Hero indicators show that T-values are greater than 1.96 which means that every indicator of established Hero archetype variable is significant. Lambda values indicate that although the values are small, they have values above t= 1.96 as shown in Table 2.

Table 2
Hero archetype validity

Indicator	Lambda	T-value
Competition	0.279	3.094
Best effort	0.283	3.129
Risk	0.558	6.586
Brave	0.573	6.794
Attack	0.648	7.872
Assertive	0.742	9.290
Fight	0.617	7.415
Difficult mission	0.262	2.894
Win	0.340	3.801

Source: Data processing

Confirmatory factor analysis test for Caregiver variable shows t-value above 1.96. Although the lambda value is small, the t values of all indicators are above 1.96. The result for validity of lambda value for Caregiver indicator is better than that of Hero, but both variables can be built by the indicator (Table 3).

Table 3
Caregiver archetype validity

Indicator	Lambda	t-value
For others	0.398	4.848
For environment	0.337	4.049
Needs	0.485	6.032
Satisfaction	0.561	7.159
Kind	0.695	9.367
Care	0.682	9.138
Warm	0.796	11.357
Love	0.886	13.424
Embrace	0.792	11.263
Comfortable	0.709	9.637

Source: Data processing

Descriptive analysis of Archetypal CRM

A and L carried out similar cause-related marketing (CRM) effort, namely to provide clean water in areas that lack access to clean water. Both products can be purchased by participants, and they can participate in the CRM programme. In this study, participants were requested to read A or L donation programme. The perception that A and L are caregivers (variable archetype caregivers) are not significantly different ($M_{A\ caregiver}$ = 4.5480 $M_{L\ caregiver}$ = 4.4243 p = .241) (Table 4). Caregiver archetype is strong on A and L, because *Mean* caregiver A and L > 4 (scale 6). Similarly, the perceptions that A and L are heroes (hero archetype variables) are not significantly different $M_{A\ hero}$ = 4.5733 $M_{L\ hero}$ = 4.5390 p = .689). According to participants, A and L are Hero, indicated by Mean > 4 (Table 4). Overall, brand A and brand L can be perceived as Hero and Caregiver and are not significantly different from each other ($M_{caregiver}$ = 4.5563 M_{hero} = 4.4866 p = .304).

Table 4
Comparison between two brands (A&L)

	Mean	Standard Deviation (SD)	F(sig)
Caregiver Archetype			
A	4.5480	.66928	$F = 1.387$
L	4.4243	.61104	$p = .241$
Hero Archetype			
A	4.5733	.51635	$F = .161$
L	4.5390	.52751	$p = .689$
Total A and L			
Caregiver Archetype	4.5563	.52044	$F = 1.061$
Hero Archetype	4.4866	.64186	$p = .304$

Source: Data processing

Table 5
Hero archetype description

	Case A N = 75		Case L N = 74	
	Mean	Std. Deviation	Mean	Std. Deviation
Competition	4.0533	1.06407	4.0541	1.03225
Best effort	4.5200	.93520	4.4189	1.00692
Risk	4.5867	.83978	4.6351	.76882
Brave	4.8000	.78843	4.8919	.90004
Attack	4.9200	.89684	5.1622	.79428
Assertive	4.9867	.90782	4.9189	.91796
Fight	5.0800	.73079	5.0676	.79950
Difficult mission	4.2000	.92998	3.8784	1.13418
Win	4.0133	.97943	3.8243	1.06447

Source: Data processing

The hero item with the highest mean was A/L to address environmental problems (Table 5). Data shows this item was highest for A and L (M_A = 5.0800; M_L =5.0676). The main features of hero, such as tackling environmental problem (M_A = 4.9200; M_L = 5.1622) and being firm about environmental issues (M_A = 4.9867; M_L = 4.9189) also have high mean score, either on A or L. Competition is not the main driver for A and L to engage in CRM (M_A = 4.0533 M_L = 4.0541). However, A and L are willing to take risks to defend their beliefs (M_A = 4.5867 M_L = 4.6351). A and L get rid of fear and do what needs to be done for others (M_A = 4.8000; M_L =4.8919).

Table 6
Hero archetype description

	Case A N = 75		Case L N = 74	
	Mean	Std. Deviation	Mean	Std. Deviation
For others	3.7867	1.05643	3.3784	1.09423
For environment	3.9867	1.10885	3.9459	1.00535
Needs	4.0400	1.00593	3.8919	1.12952
Satisfaction	4.6933	.88491	4.6216	.93197
Kind	4.7333	.90544	4.4189	.89146
Care	5.0400	.77877	5.1351	.72762
Warm	4.5733	1.01573	4.4730	.96831
Love	4.8133	.88062	4.7703	.82008
Embrace	4.9467	.86826	4.9054	.89395
Comfortable	4.8667	.82746	4.7027	.80631

Source: Data processing

Both A or L have main personality of a caregiver (Table 6). They care for others, which is indicated by mean of item care that was highest on A and L (M_A = 5.0400; M_L = 5.1351). A/L will help others more than for themselves (M_A =; M_L =). Kindness is the ultimate value for A and L (M_A = 4.7333; M_L =4.4189). A/L embrace others (M_A = 4.9467; M_L = 4.9054), provide comfort (M_A = 4.8667; M_L = 4.7027), love (M_A = 4.8133; M_L = 4.7703), and find satisfaction by giving to others (M_A = 4.6933; M_L = 4.6216).

The Effect on Brand Attitude

Mediation analysis was conducted with brand attitude as the dependent variable, hero archetype and caregiver archetype perception as the predictor, and attitude toward cause-related marketing as the mediating variable, using the OLS regression PROCESS SPSS macro model 4 and bootstrap analysis (Hayes, 2013).

Table 7
The mediation results (n = 149)

Predictors	Model 1 CRM ß (SE)	Model 2 Brand Attitude ß (SE)[a]	
Independent Variables			
Hero archetype	.5636 (.0795)**	.2844 (.1081)**	
Caregiver archetype	.4989 (.0623)**	.3081 (.0893)**	
CRM		.3960 (.0968)**	
R^2	.5511	.5145	
Bootstrap indirect effects on brand attitude (through CRM)[b]	ß (SE)	LL 95% CI	UL 95% CI
Hero-CRM-Brand attitude	.2232 (.0694)	.0975	.3742
Caregiver-CRM-Brand attitude	.1681 (.0527)	.0687	.2768

Note: LL = Lower limit; UL = Upper Limit; CI = Confidence Interval. Unstandardised regression coefficients are reported with standard error in parentheses.
[a]Direct and total effect. [b]Bootstrap sample size = 1000.
*p < .05; ** p < .01

These results showed that the effect of archetype on brand attitude was mediated by CRM (Table 7). The direct effect of hero archetype on brand attitude was significant (*c* = .2844 SE = .1081 *p* = .0094). The indirect effect of hero archetype on brand attitude through CRM was significant (*ab* = .2232, 95% *CI* .0975; .3742). The direct effect of hero archetype on brand attitude was significant (*c* = .3081 *SE* = .0893 *p* = .0007). The indirect effect of caregiver archetype on brand attitude through CRM was significant (*ab* = .1681, 95% *CI* .0687; .2768).

Through a quantitative study, we found that consumers think about the positive aspects of CRM programmes, namely the brand becomes a hero and also cares for the earth. This is indicated by hero archetype that has a significant effect on perception of CRM (*a*= .5636 *SE*=.0795 *p*=.0000), and caregiver archetype perception (*a*=.4989 *SE*= .0623 *p*=.0000). Positive perceptions of CRM have a positive effect on brand attitude (*b*= .3960 *SE*= .0968 *p*=.0001).

CONCLUSION

Cause-related marketing has become a trend in recent years; it contributes to resolving social problems and environmental conservation. Its success is determined by participation of consumers. Therefore, CRM does not only create a brand image, but can achieve social goals by engaging the consumers. The archetypal power of brand building cannot be denied, and major brands of the world have strong archetypal imaging (Mark & Pearson, 2001).

For centuries, people have loved hero stories. Being described as strong, noble hearted, handsome, fighting against evil, the hero ultimately emerges victorious (Campbell, 2004). In the real world, where there is evil and oppression of the weak, a hero figure is needed, fighting to protect and defend the weak. In facing environmental and welfare sustainability, the brand emerges as a hero. Hero together with his followers helps people who lack resources. The image of a hero is very powerful; he is able to captivate the hearts of his followers who are also kind.

Brands are imaged as brave, strong-willed, help the weak, and be a winner. It fits well with CRM to achieve social agenda. Brand becomes the saviour of the earth. Therefore, in the end, brand does not only save the earth, but also sales.

Everyone has a caring instinct. Concern for the earth is manifested in the effort to care for the earth. Unlike the hero identified with violence, a caregiver is seen as tender. Which image is strong: hero or caregiver? Our research shows that brands are imaged as a hero and as a caregiver as well. Brand is brave but has a gentle heart. Brand saves the earth and also cares for the earth. Brand helps who needs, but also cares about them. It is not wrong if we say by taking care of earth, we save her from damage. Environmental sustainability will be created through the hands of hero and caregiver.

For the company, hero and caregiver personality have a positive effect on the brand. The implication for the company is to build a brand image depicting a hero or caregiver, make consumers perceive CRM as well and respond positively to CRM tactics, which will ultimately shape a positive brand attitude. Behaviour theory states that attitudes become predictive of behaviour. Thus, it is expected when consumer purchase intention is higher, the company's social awareness and profit can be aligned.

This study sampled two brands, which is the limitation of this study. Therefore, the results are difficult to generalise in CRM programmes and do not rule out the possibility that the limited sample showed the hero and caregiver archetype as equally strong. Future research should look at bigger samples, different product types, and other consumer segments. Green advertising is the focus of the current researchers' next study. This is because research is needed to persuade consumers to be motivated to help others in need, care for the environment and save the planet for the future generation.

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Improving BTS Capacity and Location using Particle Swarm Optimisation: A Case Study of South West Java

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ABSTRACT

Telecommunications operators need to solution to extend the lifecycle of **Base Transceiver Station** (BTS) to minimise their capital expenditure (Capex). Currently, there is a single tower for single operator, which means the business is not managed optimally. This study aims to optimise existing BTSs by maximising its capacity and its strategic location via Particle Swarm Optimisation (PSO). The PSO is aimed at reducing the number of towers and encourage sharing between operators. Based on PSO data by optimising existing BTS capacity and tower sharing, a 72% reduction in capex can be achieved. Therefore, infrastructure sharing is vital to reduce Capex problem faced by the operators. The study proposes open access among operators.

Keywords: Base Transceiver Station, capacity, location, operators, Particle Swarm Optimisation, tower sharing

INTRODUCTION

The number of Indonesia telecommunication subscribers, especially cellular users, has been increasing since 2010. However, the telecom operators must maintain or reduce their expenditure to ensure their survival.

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Table 1
PSTN, FWA and cellular subscribers (2010-2015)

Types	2010	2011	2012	2013	2015	2015
PSTN	9,349,998	8,650,716	7,667,184	10,085,624	9,885,971	10,378,037
Wireless	243,779,422	279,772,383	312,279,336	331,209,063	341,921,894	341,482,747
PWA	32,579,125	29,966,764	30,315,671	18,482,149	16,339,003	2,534,407
Cellular	211,200,297	249,805,619	281,963,665	313,226,914	325,582,891	338,948,340
Total Subscriber	253.129.420	288,423,099	319,946,520	341,794,687	351,807,865	351,860,784

Source: Badan Pusat Statistik Indonesia, 2017
(Central Statistics Body, Indonesia)

Based on Table 1, there is a decrease from year-to-year the number of cellular subscribers in Indonesia. This shows that the business tends to be mature in the lifecycle. Stiff competition among telecom operators means they must manage their business more efficiently. Moreover, the operators have faced increasing CAPEX in recent years.

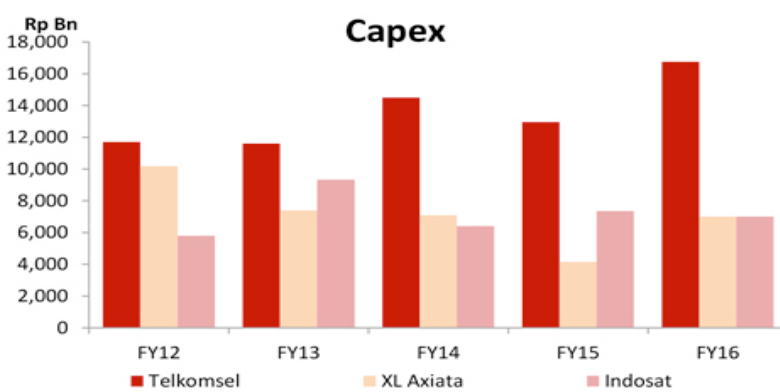

Figure 1. CAPEX of Telecom operators in Indonesia
Source: Operator Annual Reports

From the view of efficiency, we need synergies among operators for infrastructure sharing for "cost efficiency". Earlier studies examined optimising existing networks using various methods, namely genetic algorithm, simulated annealing, ABC algorithm. This study used Particle Swarm Optimization (PSO) to optimise network sharing.

LITERATURE REVIEW

Operations Management

Operations management is an important driver every organisation. It has many definitions and among there are:

1. ***"Operation management is about how organisation produce and deliver goods or services that defines their existence"*** (Porter, 2009)
2. ***"Operations management is about how organisations create and deliver services and products."*** (Slacks, Brandon-Jones, & Johnston, 2013)
3. ***"Operations management designs, operates, and improves productive systems for getting work done."*** (Russell & Taylor, 2011)

Therefore, operations management focuses on value creation of goods and services by changing input to output. The operations processes are defined by four Vs (volume, variety, variation in demand and visibility the customer level of appearance of the creation of their output (Slacks et al., 2013).

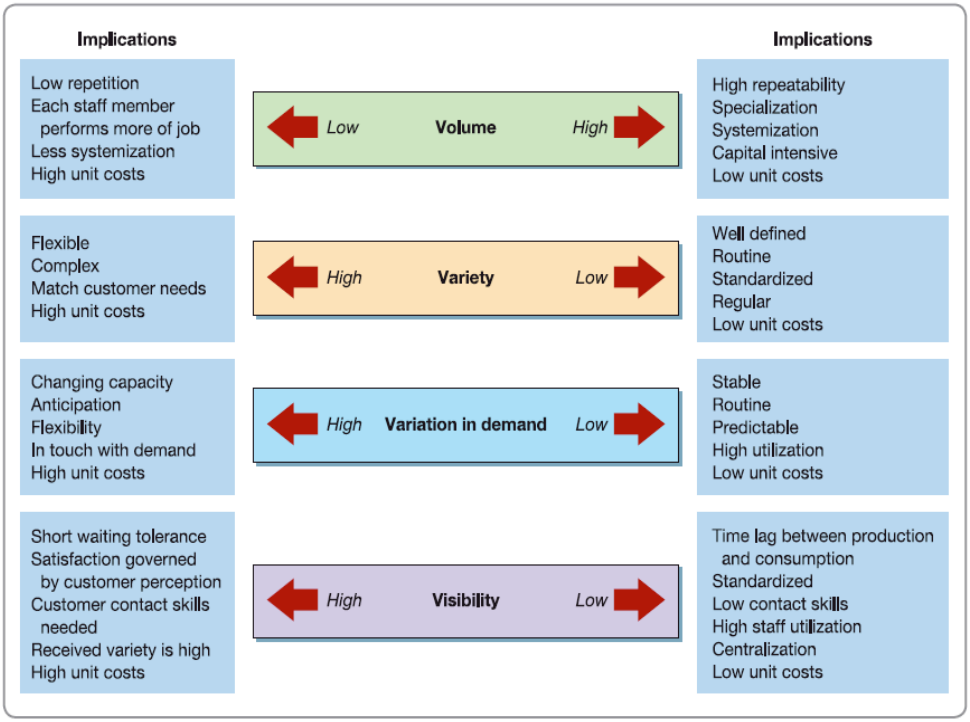

Figure 2. A topology of operation
Source: (Slacks et al., 2013)

Efficient operations provide the company with a competitive advantage. This is measured by cost, time, quality and flexibility (Porter, 2009).

1. **Cost,** if price is an important factor in winning competition, then it is important to keep it lower than the competition. Cost plays an important role in bringing the product into a competitive market that is not easily matched by others.
2. **Time,** measures delay or how fast the operations is from the time of request to the time of receipt. Speed is crucial for customers in making decision.
3. **Quality,** covers process and quality of the product/service.
4. **Flexibility,** flexibility is needed so the organisation can adapt to changing customer needs in terms of product range and varying demand and can cope with capacity shortfalls due to equipment breakdown or component shortage.

Below are the activities that are listed under production and operations management functions (Kumar & Suresh, 2016):

1. **Location of facilities** is a long-term capacity decision which involves a long-term commitment about the geographically static factors that affect a business organisation.
2. **Plant layouts and material handling,** refer to the physical arrangement of facilities. It is the configuration of departments, work centres and equipment in the conversion process.
3. **Product design,** refers to the translation of idea to a potential product. Product design and development is connected marketing and customer needs and expectations.
4. **Process design,** is a macroscopic decision-making of an overall process route for converting raw materials into finished goods.
5. **Production and planning control,** is the process of planning the production ahead, determining the flow from production to retail as well as track its progress.
6. **Quality control,** may be defined as a system that is used to maintain a desired level of quality in a product or service.
7. **Materials management,** is the aspect of management function which is primarily concerned with the acquisition, control and use of materials needed and the flow of goods and services connected with the production process having some predetermined objectives in view.
8. **Maintenance management,** in modern industry, equipment and machinery are a very important part of the total production.

Capacity

Capacity is the maximum level of value-added activity over a period of time that the process can achieve under normal operating conditions (Slacks et al., 2013). To define capacity, one need to include both the volume and time based on capacity. Therefore, capacity could be considered as the degree to which the organisation is capable of providing service and goods to its customer in a timely manner (Porter, 2009).

Decision and capacity have an effect on cost. If capacity is big, it may not increase manufacturing cost (Sarjono, Kusuma, Hamali, & Mulyono, 2016). Measuring demand and capacity is important.

The decisions taken by operations managers in devising their capacity plans will affect several different aspects of performance (Slacks et al., 2013):

- **Costs** will be determined by the balance between capacity and demand. If capacity is higher, the system becomes underutilised and hence, high unit costs.
- **Revenues** relate to the difference between capacity and demand in such a way, when capacity levels equal to or higher than demand at all time that guarantee all demand is satisfied, and no potential revenue will be lost.
- **Working capital** - if an operation decides to keep finished goods for future demand. This might allow demand to be satisfied, but the organisation will have to fund the inventory until it can be sold.
- **Quality** of goods or services relate to changing capacity level due to fluctuating demand that require the operation to hiring and firing option. The use of temporary hires may result in poor product and service quality.
- **Speed** in responding to customer need can be improved by providing enough inventory and ensure capacity level well above the maximum demand.
- **Dependability** of input will also be determined by how close order levels are to capacity.
- **Flexibility,** in volume flexibility capacity well above the maximum demand can be achieved. If there is a balance between demand and capacity, the ability to unprepared change will not be achieved.

Location

Location decisions has an impact on cost and the business ability to serve its customer. It is also true that businesses cannot easily change their location. Moving an operation to a new place is costly and also cause inconvenience to existing customers (Slacks et al., 2013).

The organisation should take into account the location. In order to serve customer's needs better and for long term demand consideration, location has to be considered carefully. The consideration includes but not limited to competition, cost and the size of the facility. Company's location will have an impact on costs and competitiveness. Since production and delivery of goods are part of the operation, a convenient location is vital and will better serve the customer. There are three location factors (Porter, 2009):

1. Proximity to customer
2. Proximity to supplier
3. Proximity to labour

It can be concluded that a strategic location is beneficial for the company.

Capital Expenditure (Capex)

Capital spending is sometimes associated with investment or development spending, where expenditures have benefits extending into years (Jacobs, 2009). Specifically, capital expenditure is related to acquisition or construction of a fixed asset (land, building, vehicle, and equipment) or enhancement of an existing fixed asset, and whose benefits will be realised over a time greater than one year. Capital expenditures is one of the largest and riskiest in corporate financial statements. An understanding of motivators for capital investment decisions is valuable for investors, regulators, auditors, and the public at large (Litt, 2013). The decision of Capex will affect the future of company's cost structure. Capital expenditure decisions should be based on a consolidated budget approach, incorporating all revenues and expenditures with a medium-term budget perspective (Jacobs, 2009).

Telecommunication Infrastructure

Telecoms infrastructure for operators primarily consists of (KPMG Africa, 2011):

- Active infrastructure (such as spectrum, switches, antenna)
- Passive infrastructure (such as towers, BTS shelters, power)
- Backhaul.

Figure 3. Telecoms infrastructure for operators
Source: (KPMG Africa, 2011)

Operators face two challenges: manage competition and increase their profit margins. Building infrastructure is very expensive and hence, towers that are shared would reduce costs (KPMG Africa, 2011):

- **Mature networks:** Tower sharing is an important sign of Network maturity. Sharing tower, in general, is less likely in a developing country due to competition.
- **Growing market:** Growing markets mean an ever-increasing need to expand network for the operators. If operators have the ability to share towers, they will typically be able to roll networks out much faster
- **High cost regional/rural areas still being rolled out:** Operators tend to have a rollout obligation as part of their licencing requirements. In certain sparsely populated rural areas the operator may need to have their own network, and this could mean an unprofitable investment. In this case it is better to share towers so that each operator will not rely on their own network to cover the unprofitable areas.
- **New entrants looking to build scale:** Sharing towers with existing operators would help new entrants in rolling out the program.
- **Pressure on costs:** Sharing towers will improve competitiveness due to a low investment cost, which is key to profitability.

Communication tower means a principal structure that is intended to support communication equipment for telephone, radio and similar communication purposes. The term "communication tower" shall not include towers not exceeding 75 feet in height. Communication towers are generally described as either monopole (freestanding), lattice (self-supporting), or guyed (anchored with guy wires or cables), (Taylor Government, 2008). Technically, the type of tower (tower height) to be constructed is adapted to the area of the tower (open area, rural area, sub-urban areas, or urban area).

Following are costs involved in tower construction:

1. Licensing: costs incurred to manage towers.
2. Site Acquisition (SITAC): cost involved in the erection of a tower.
3. Tower Foundation; costs incurred to create the basic foundation of the tower.
4. Shelter Work: the cost to build the technical tower.
5. Fence and Landscape work: the costs related to the work associated with the fence and the ground.
6. Mechanical and Electrical equipment and installation: costs incurred for equipment and electrical installations.

Particle Swarm Optimisation

Kennedy as the initiator of particle swarms idea (a social psychologist) and

Eberhart (an electrical engineer) created computational intelligence by investigating simple similarity of social interaction, rather than a single cognition in 1995. As described by Eberhart, Shi and Kennedy (2010), the PSO algorithm is an adaptive algorithm based on a social-psychological metaphor; a population of individuals (referred to as particles) adapts by returning stochastically toward previously successful region (Eberhart et al., 2001)

In PSO, several simple units—the particles—are put in the search space of some problem or function, and each investigates the objective function at its present position (Van & Bergh, 2001). Each particle then calculates its motion through the search space by putting together some aspects of the previous best position to other member of the swarm, with some random perturbations. The next iteration takes place after all particles have been moved. Instead of using evolutionary operators to manipulate the individual particle, each particle is treated as a valueless particle in D-dimensional search space and keeps track of its coordinates in the problem space associated with the best solution (evaluating value) (Gaing, 2004). This value is called best. Hence, the current position $\overrightarrow{x_i}$, the previous best position $\overrightarrow{p_i}$, and the velocity $\overrightarrow{v_i}$.

The current position $\overrightarrow{x_i}$, can be considered as a set of coordinates describing a point in space. In every algorithm iteration, the present location is a problem solution. If that location is better than any that has been found so far, then the coordinates are stored in the second vector, $\overrightarrow{p_i}$,. The value of the best function result so far is stored in a variable that can be called pbesti (for "previous best"), to be compared with results of later iterations. The aim is to continue searching for better positions and updating $\overrightarrow{p_i}$,. and $pbest_i$. New points are chosen by adding $\overrightarrow{v_i}$ coordinates to $\overrightarrow{x_i}$, and the algorithm operates by adjusting $\overrightarrow{v_i}$, which can effectively be seen as a step size (Poli, Kennedy, & Blackwell, 2007).

MATERIALS AND METHODS

This study aims to optimise the BTSs in South West Java that suffer from inefficiency and location issues.

A preliminary study was carried out to analyse the development of telecommunications and the growth of the new BTSs in South West Java Province. Telecommunications companies must strive to meet the needs of their customers, by improving the quality of the network that can be achieved with the addition of BTSs.

The following are the methodology adopted in this study:

(1) Field Study

(2) Focus Group Discussion among operators

(3) Develop PSO Code Program

The objectives of the study are to optimise: a) the capacity of a BTS Tower (one tower can have more than one BTSs. b) the location The constraint: the BTSs within a 3-km radius will be in the same tower

(4) Data processing using PSO Code Program

(5) Analyse optimization result

(6) Propose the open access among operator

Coding of PSO is shown in Figure 4

```
function [ g ] = pso( g )
%% Generate Individual with Upper and Lower Position
Nvar = size(g.FieldDR,2);
Nind = g.MAXIND;

aux = rand(Nind,Nvar);
m=[-1 1]*g.FieldDR;
ublb=ones(Nind,1)*m;
lb=ones(Nind,1)*g.FieldDR(1,:);
ind=ceil(ublb.*aux+lb);

%% Optimize Looping
BestCost=inf;
BestSol=zeros(1,Nvar);

[B K] = size(ind);

C1 = 0.4;
C2 = 0.4;

%inisialisasi kecepatan partikel (velocity)
V=[];
 for j = 1:Nind
    for jj = 1:K
        V(j,jj)=0;
    end
 end

Z=[];
```

Figure 4. PSO code program

RESULTS AND DISCUSSIONS

Based on the Field Result and Data from the operator, we find 2967 BTS combinations for South West Java Province. MATLAB software and PSO code program was used to obtain the results shown in Figure 5:

1	TSEL_BDS2	-	3G2IP_JL_JAMII	-	257,992,920.00
2	TSEL_BDG8	XL_MC345:	3G2IP_SUKAJAD	H3I_100240	128,996,460.00
3	-	XL_351B02	U_PANGHEGAR	H3I_102609	171,995,280.00
4	TSEL_BDG5	XL_141	_DCS_BRAGA_C	H3I_103598	128,996,460.00
5	TSEL_BDK1	XL_351089	U_CIKUTRA_IM	H3I_103191	128,996,460.00
6	TSEL_BDG6	XL_2109	-	H3I_100524	171,995,280.00
7	TSEL_BDG1	XL_251337	DCS_CARINGIN-	H3I_105124	128,996,460.00
8	-	XL_1904	-	H3I_102527	257,992,920.00
9	TSEL_BDK2	XL_496	3G2IP_SARASA-	H3I_100517	128,996,460.00
10	TSEL_GRT2	XL_B126	RANCAMANYAF	H3I_103156	128,996,460.00
11	-	-	3GIP_PARONGF	H3I_105148	257,992,920.00
12	TSEL_CMI0	XL_251330	CIMINDI-ISAT83	H3I_102736	128,996,460.00
13	TSEL_BDK4	Axis_JBKB0	CIKIWUL_CLNG:	H3I_100268	128,996,460.00
14	TSEL_BDG8	XL_351PX1	CIUMBULEUIT-I	-	171,995,280.00
15	TSEL_BDG8	XL_351MC(	ANCOL-ISAT810	H3I_100482	128,996,460.00
16	-	XL_351056	-	H3I_105143	257,992,920.00
17	TSEL_BDG8	XL_MC346	PUNGKUR-ISAT:	H3I_103676	128,996,460.00
18	TSEL_BDG4	-	GND_AQUILA-IS	H3I_103831	171,995,280.00
19	TSEL_BDG2	XL_2041L1	U_SEKEJATI-ISA	-	171,995,280.00
20	TSEL_BDG4	XL_1925	MKRAMAT-ISAT	H3I_103398	128,996,460.00
21	TSEL_BDG0	XL_251C30	3G_CIKAWAO-I:	H3I_105002	128,996,460.00
22	TSEL_BDG9	XL_351EJ8	DCS_LUCKY_SQ	H3I_100483	128,996,460.00
23	TSEL_BDG3	XL_A935	SUKAMENAKINI	-	171,995,280.00
24	TSEL_SKB0:	XL_351PX0	3GIP_CIGEMBA	H3I_100534	128,996,460.00
25	TSEL_BDG4	XL_466	DCS_HOTEL_PE	H3I_101624	128,996,460.00
26	TSEL_BDG0	XL_3122	U_BRAGA-ISAT:	H3I_100266	128,996,460.00
2935	-	XL_BJ29	SUKAWENING-I	-	257,992,920.00
2936	TSEL_MJL1	XL_BJ43	-	-	257,992,920.00
2937	TSEL_KNG1	Axis_JBKNC	-	-	257,992,920.00
2938	TSEL_GRT1	-	MAROKO_TB-IS	-	257,992,920.00
2939	-	XL_1994	-	H3I_102565	257,992,920.00
2940	TSEL_CMI1	-	KOL_MASTURI_	-	257,992,920.00
2941	TSEL_MJL0	XL_251179	-	-	257,992,920.00
2942	TSEL_BDB0	XL_251056	-	-	257,992,920.00
2943	TSEL_SKB6	XL_346417	-	-	257,992,920.00
2944	TSEL_SKB0:	-	DCS_CIBARENG	-	257,992,920.00
2945	TSEL_SMD:	-	-	H3I_100895	257,992,920.00
2946	-	Axis_JBSC0	CIJENGKOL-ISAT	-	257,992,920.00
2947	-	XL_251032	-	H3I_101409	257,992,920.00
2948	TSEL_GRT3	-	-	H3I_102852	257,992,920.00
2949	-	XL_251160	M_KUDUKERAS	-	257,992,920.00
2950	TSEL_CRB5	XL_2082	-	-	257,992,920.00
2951	TSEL_TSK6	XL_251080	-	-	257,992,920.00
2952	-	XL_346499	DCS_MANGGAH	-	257,992,920.00
2953	TSEL_BDS1	XL_B166	-	-	257,992,920.00
2954	TSEL_GRT0	XL_251001	-	-	257,992,920.00
2955	TSEL_CJR3:	-	3GIP_CIBINONG	-	257,992,920.00
2956	TSEL_SMD(	XL_BJ42	-	-	257,992,920.00
2957	TSEL_GRT1	-	-	H3I_102771	257,992,920.00
2958	TSEL_BJR0:	-	-	H3I_101150	257,992,920.00
2959	TSEL_SKB6	-	DCS_CIPELANG:	-	257,992,920.00
2960	TSEL_SKB0:	-	GUNUNG PADA	-	257,992,920.00
2961	-	XL_251174	-	H3I_103100	257,992,920.00
2962	TSEL_CRB5	XL_251156	-	-	257,992,920.00
2963	TSEL_GRT0	-	SANCANG-ISAT	-	257,992,920.00
2964	TSEL_BDB0	-	DCS_UNJANI_PI	-	257,992,920.00
2965	TSEL_SKB6	XL_241252	-	-	257,992,920.00
2966					
2967				CAPEX	670,566,597,900.00

Figure 5. Results of BTS optimization

Based on Figure 5, for example, number 2935, we can see that 2 nearest BTSs can incorporate (XLB129 and SUKAWENING). Incorporating those BTSs reduces Capex by Rp257,992,920.00. For all combinations (until number 2967), we BTS Optimisation can reduce Rp 670,566,597,900 in Capex. A reduction of 72% in Capex can be achieved if we optimise the capacity of the tower and the location. Open access among operators must be mutually agreed upon. In Figure, the combination of 2 BTSs in one tower can save costs and other operators can share the existing tower. Figure is a blueprint for BTS optimisation:

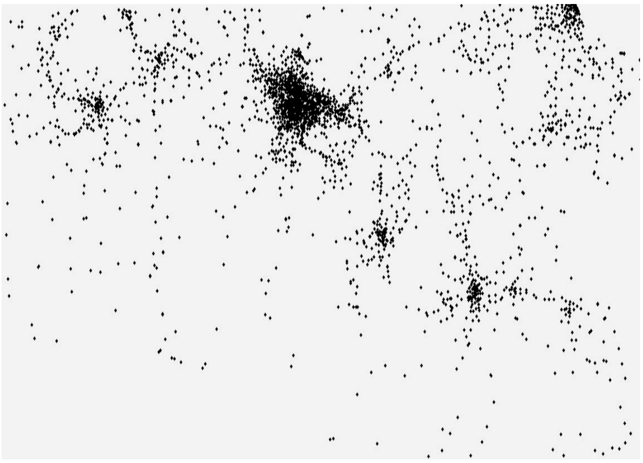

Figure 6. BTS optimisation blueprint

The map shows all of BTS combinations that occupy a tower, the combination solutions can be 1 BTS, 2 BTSs, 3 BTSs or 4 BTSs in a tower. The more BTSs in a tower, the lower the Capex.

CONCLUSION

The PSO approach allowed reduction of 72% y in CAPEX if infrastructure is shared among the operators. Therefore, government must encourage infrastructure sharing which results in cost efficiency. Low cost ensures the business is profitable. This study contributes to literature by proposing a new method using PSO to increase efficiency level. The infrastructure sharing has positive impact on the capex while optimising BTS capacity. Future research can look at different methods of optimisation, so that it can be proposed the best method to solve the infrastructure optimization.

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The Influence of Business Process on Accounting Information System Quality

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ABSTRACT

Accounting information systems (AIS) is a tool to help a company's daily operations and assist management in decision-making. An integrated information system is usually used to achieve user satisfaction. Thus, AIS is used to improve the quality of improve the business processes of a company to improve its efficiency. The sample for this study was 61 state-owned enterprises and explanatory cross-sectional survey was conducted among the heads of accounting department, chief financial officer and the head (branch manager). Structural Equation Modelling (SEM) approach and Partial Least Square (PLS) were used to analyse data obtained. The results showed business processes affected the accounting information system.

Keywords: Accounting Information Systems, business process

INTRODUCTION

Globalisation has encouraged intense competition among companies (Whitten & Bentley, 2007). A strategy that utilises all the strengths and opportunities of a company based on the right information is important which will in turn ensure the company makes appropriate decisions (Bodnar & Hopwood, 2010; Meiryani, 2018). Therefore, quality accounting information (Al-Hakim, 2007) is vital and offers a competitive advantage for the organisation. Quality information is generated by quality accounting information systems (AIS) (Laudon & Traver, 2011). Specifically, quality information system is an integrated information system that meets company expectations.

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According to Nicolaou (2000), integration is the key to successful AIS. The integration of the components of AIS offers the company substantial advantage (Meiryani, 2017; McLeod & Schell, 2006). However, there are challenges in terms of having a good AIS be it business (Karlis, 2011; Suharto, 2007) or non-business (Martowardodjo, 2011; Nasution & Yarns, 2009; Praja, 2014; Suprijadi, 2010) institutions. In non-business (government) such as the Directorate General of Mineral and Coal, low quality of accounting information systems may lead to a potential a loss of tax revenue from the mining sector. In 2012 whereby data coal production, according to the Directorate General of Mineral and Coal reached more than 20 trillion (Praja, 2014). The oil and gas production at special work unit does not have an integrated system, neither does it have an accurate data on oil production.

According to Nasution and Yarns (2009), AIS in government is not integrated and this was confirmed by the Director General of Taxes, Customs. Suprijadi (2010) found the information systems for National Single Window (NSW) at the Port of Batam which started had not been integrated. The same problem is faced by Ministry of Finance based on the information provided by Directorate General of Taxation (Martowardodjo, 2011). The banking industry according to Boediono (2010), Executive Vice President of Indonesia, must provide accurate and transparent information. Budi Rohaidi (2012), Deputy Governor of Bank Indonesia, said many banks have manipulated their financial statements (window dressing) for small banks as well as for the big banks. A similar claim was made by Budi Mulya (2011), Deputy Governor of Bank Indonesia, who said there is an increasing demand for transparency of accounting information.

LITERATURE REVIEW

Laudon and Traver (2011) stated that a business process involved workflow of concrete material, information, and knowledge of a series of activities (business processes are concrete workflows of material, information, and knowledge-sets of activities). They added that business processes refer to the unique way in which work is organised, coordinated, and focused on producing a valuable product or service. Hurt (2007) explained that business processes are the policies and procedures used in the organisation to create value for stakeholders, such as customers, stockholders, suppliers, and others.

Jones and Rama (2003) stated that a business process is a sequence of activities performed by a business. Bagranoff, Simkin and Norman (2010) defined the term business process as a collection of activities and workflow within the organisation that creates value (a business process is a collection of activities and workflows in an organisation that creates value) (Fendiani & Tandiono, 2016). Whitten and Bentley (2007) said business processes are the work, procedures, and rules needed to complete business tasks, regardless of the information technology used to automate or support them (business process are the work, procedures, and rules required to complete the business tasks, independent of any information technology used to automate or support them). They added the task of responding business process business events, such as a customer order. Bagranof et al. (2010) stated that two business process that are common to every business organization which are: (1) sales process: begin with customer order and end with the collection of cash from the customer; (2) purchasing process: the accounting information systems is concerned with timely payment for purchased goods and services".

Therefore, it can be said that business process is a series of activities/procedures clear to complete business tasks in creating value (Azhar Susanto & Meiryani, 2018a, b; Bodnar & Hopwood, 2010; Hurt, 2007; Laudon & Traver, 2011; Whitten & Bentley, 2007). Hoque (2006) described two dimensional business process as follows: 1) primary activity: activity of reception, storage, and distribution of material to produce products/services and activities to inform the customer about the products/services produced by the company; (2) Supporting activities: activities of daily operations (accounting, finance, law and public administration, activities associated with employees (recruitment, hiring, training and compensation payments) and the activities of improvement of products/services (research & development, investment in information technology, website development, product design).

Bodnar and Hopwood (2010) stated that all business processes have a starting point and end point namely, managing customer orders. They explained dimensions of business process consist of a primary activity and supporting activity. According to Romney and Steinbart (2011), there are two dimensional business processes: (1) primary activity: and (2) support activity. Activities can be conceptualised as forming a value chain consisting of primary activities that directly provide value to customers and support activities allow the primary activities to be performed efficiently and effectively. Primary activities refer to activities of receiving, storing and distributing materials that an organisation uses to create the services, and products it sells; and activities that help customers access the organisation's products or services.

Laudon and Traver (2011) reported business process consists of two (2) dimensions, namely:

Primary Activity: includes the activities of reception, storage, and distribution of material used by the organisation to produce products/services produced; and activities to inform customers about the products/services produced by the company.

Support Activity: activities of daily operations (accounting, finance, law and public administration), activities associated with employees (recruitment, hiring, training and compensation payments) and activity improve products/services (research and development, investment in information technology, website development, product design).

Bagranoff et al. (2010) stated that there are two common business processes in any business organization, namely: (1) the sales process which starts with the customer's order and ends with cash collection from customers; (2) the purchase process which involves accounting information system with regard to timely payment for goods and services purchased. Mcleod and Schell (2006) reported dimensional business process consists of a primary activity and support activity. Primary Activity includes: (1) logistics inputs obtain raw materials and supplies from suppliers; (2) operating companies that transform raw materials into finished goods; (3) the output logistics of moving goods to customers; (4) marketing and sales that identify customer needs; (5) get orders and activity-activity services that maintain good customer relations after sales. Support activity includes (1) infrastructure of the organisation that generally affects the entire main activity; (2) management of human resources; (3) the development of technology; (4) procurement/purchasing.

Hurt (2007) said critical business processes within the organisation include sales process, purchasing process, conversion processes, financial processes, and human resources processes. This was supported by Romney and Steinbart (2011) that the activities of the business process consist of revenue cycle, discharge cycles and the cycle of human resources. Therefore, it can be said that dimensions of business process is the primary activity with activity indicator for reception, storage and distribution of material inputs used by the organisation to produce products/services produced and activities to inform customers of these and support activity referring to improving products/services (Hoque, 2006; Laudon and Traver, 2011; Romney & Steinbart, 2011).

MATERIALS AND METHODS

Suriasumantri (2009) stated that research method is a method used in the study. The research methods used in this study are based on survey. Sekaran and Bougie (2013) described the survey methods as collection of information from those who act as a source of information. Furthermore, Nazir (2011) stated that in the survey method, the researchers not only describe phenomena, but also explain the relationship, test hypotheses, make predictions, and acquire the meaning and implications of a problem to be solved. This research can provide an overview of phenomena related to the variables examined in this study, namely business strategy, leadership style, business processes, the quality of accounting information systems and the quality of accounting information. In terms of the type of study (the type of investigation), this kind of research is both verification and are explanatory (explanatory research) or causality (causal study), because this research aims to find out if and how far the factors that predicted affect a variable (Kuncoro, 2007). This research may explain how much influence variable business strategy, leadership style, business processes, the quality of accounting information systems and influence the quality of the SIA.

RESULTS AND DISCUSSIONS

The results of descriptive statistics on business processes can be explained as follows:

> Business processes in state-owned companies are at the level of clarity/stability of where the business processes are often both the primary activity and supporting activity. Companies sampled for these studies often have clear procedures/business processes to achieve company goals.
>
> Based on the calculation of the relative frequency of variable business process analysis at 0% units responded very low/good/never. It can be interpreted that the state-owned company's clarity of a business process is still low in achieving the company's goals.

The results of descriptive statistics on the quality of accounting information system can be described as follows:

> The score 3.1 means information system is used often to accommodate the needs of the user. It is interpreted that the accounting information system has the capability of integration, ease of use, accessibility, and adaptability.

Based on the calculation of the relative frequency of variable business, process analysis at 0% units responded very low/good/never. It can be interpreted that the state-owned company has a low clarity of a business process in achieving the company's goals.

Based on the results of hypothesis testing, the p-value = 0.00. As the P value less than 0.05, Ho is rejected. The conclusion is that business processes affect the quality of accounting information systems at a significance level of 0.05. Thus, the clearer the r business process procedures, the quality of accounting information systems is increasing.

A testing of the effect of business processes on the quality of accounting information system showed p-value less than 0.05 at the 5% significance level to reject H0. Better business processes can lead to ensure high quality of accounting information system. It can be concluded that the data provide evidence on the influence of business processes on the quality of AIS. The activity of reception, storage, and distribution of material inputs by the organisation to produce the product/service has an average score of 3.65 (category of often applied). This meant the sample of the study on average tended to implement business process activity, such as receiving, storing and distributing of material by f the organisation producing products/services and carrying out operational activities of the company.

As for the second indicator that the application of primary activity in the form of activities inform customers about the products/services produced had an average score of 3.33 (in the often category). This means that the operation of accounting information systems by the sample often implement business processes of primary activity in the form of activities to inform customers about the products/services produced. Business processes affect the quality of accounting information systems. This was emphasised by SOE Ministerial Regulation No. PER-02/MBU/2013 that internal information systems should be executed according to the company's business processes accurately, efficiently and effectively. In other words, the computer application (SIA) in state-owned enterprises are based on the needs of information and tasks that must be executed in supporting primary and supporting companies' activity in the form of a series of activities for reception, storage and distribution of products and services produced; socialisation/market products and services produced; a series of daily operational activities; a series of activities related to employees and a series of activities that improve products/services.

According to Whitten and Bentley (2007) business processes has an influence on the accounting information system. This was in line with Laudon and Traver (2011); O'Brien and Maracas (2007) who said that the business process is a factor that is considered when planning the organisation and that the success of an accounting information system must not be measured only by the efficiency in terms of minimising the cost, time and resource usage information; rather, it should be measured by the effectiveness of information technology in support of the organisation's business processes, and enhance customer value and the company's business. The business processes in the SOE environment occurs where the work is organised, coordinated, and focused on producing a product or service that adds value to the consumer. PT. PLN business process for example starts from power plants managed by a subsidiary processed on Hydroelectric Power Plant (HEPP), Steam Power (power plant), Power Gas and Steam (Power Plant), Power Plant (NPP), and Diesel Power Plant (diesel). The electric current supplied to the distribution company is sold to customer. Business processes in the PT. PLN is organised, coordinated, and focused on producing a product or service that adds value to the consumer, thus affecting the quality of accounting information systems that use state-owned enterprises.

The results of this research supported the theory and proved that business processes affect the quality of accounting information systems. O'Brien (2004) for example, argued business process is the basic framework to the development of information systems. Furthermore, Bagranoff et al. (2010) stated that the effectiveness of the business processes supporting the quality of accounting information systems. O'Brien (2004) agreed the business process is the basic framework of the development of information systems (Laudon & Traver, 2011).The results of this study confirmed those of Nowicki

Lewis and Lippitt (2005) who investigated the implications of business processes on quality information systems. Jones and Rama (2003) revealed business process is a positive aspect in improving system performance information. Sekaran and Bougie (2013) found that an integrated understanding of business processes will improve the effectiveness of communication for the development of information systems. Therefore, business process and system design are important factors in determining the success of information systems.

CONCLUSION

It can be concluded from the foregoing that business processes affect the quality of accounting information systems. Not yet fully qualified accounting information systems have not implemented because of the primary business process activity and supporting optimal activity. Stable business process / can improve / maintain the quality of accounting information system, conducted by: (1) Duties and authority of employees must be clear and formalized in the form of decree issued and signed by the leadership. Sufficient and clearly documented rules strongly support the smooth operation of the organization; (2) Provide continuous training to all users of accounting information systems so that users of accounting information systems have adequate knowledge and skills in accordance with their work in operating accounting information systems.

Suggestions

Operational Suggestions

Based on the results of, it is recommended that in order improve the quality of accounting information systems, businesses must ensure: 1) Duties and authorities of employees are clear and stated formally in the form of a decree issued and signed by the leadership. The rules are adequate and documented to support the smooth operation with the organisation; 2) ongoing training for all users in in SIA so users have adequate knowledge and skills.

Suggestions for Development of Science

In order to meet the characteristics of scientific research that is replicable (Sekaran & Bougie, 2013), future research should look at different samples so that findings can be generalised.

Research has not yet revealed all the variables that can affect the quality of AIS, which have implications for the quality of accounting information. Other researchers are expected to examine variables, such as information technology, the support from top management, change management, competency and others.

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Measuring Knowledge Management System Implementation Readiness

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ABSTRACT

Knowledge Management (KM) has been considered to be an integral and essential part of an organisation. KM holds a role in making tacit knowledge explicit knowledge. An organisation needs to implement KM system (KMS) to accommodate the needs of knowledge sharing in an organisation. Many kinds of facilitating factors are required when implementing knowledge management system. KMS readiness measurement allows an organisation to evaluate its capability for effective knowledge sharing before KMS is implemented. This research aims to elaborate the readiness of KMS model based on people, organisational structure, culture, process and information technology.

Keywords: Implementation, knowledge management, knowledge management system, readiness

INTRODUCTION

Knowledge Management (KM) has become an important and integral part of an organisation. Knowledge cannot be seen and quantified (Salwa & Susanty, 2016) but have a big role in competitive advantage. Beccara-Fernandez, Gonzalez and Sabherwal (2004) went on to say that KM holds a role to make tacit knowledge explicit knowledge within an organisation in order to allow the organisation to continue learning and innovating. Shifting paradigm of industrial economy to a knowledge economy brings KM to the forefront of industry (Kristin & Ekawati, 2016). Nowadays, to gain competitive advantage, organisations need to exploit

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current knowledge and combine them into organisational knowledge (Jones & Leonard, 2009; Malhotra, 2000). Frost (2010) stated that it becomes necessary for KM system to be implemented in an organisation with the aim of accommodating the activity of knowledge sharing in an organisation. KM system is a system containing a collection of IT-based knowledge repository that everyone working in the organisation are able to access. It aims to create knowledge sharing, where knowledge can be disseminated and implemented by everyone throughout the process within an organisation. Alavi and Leidner (1999) define Knowledge Management System (KMS) as an information system applied to manage organisational knowledge in a way that supports and enhances organisational process at creating knowledge, storage/retrieval, transfer, and application. This type of information system major purpose is to facilitate the sharing and integration of knowledge.

Many kinds of facilitating factors are required to succeed in implementing knowledge management system. Even though there might be no perfect measure, there must be some effort to identify the readiness of knowledge assets of an organization. It is very important to do readiness identification for implementing KMS in an organization (Tiwana, 1999) to see if it is ready to implement KM system. According to Keith, Goul, Demirkan and Nichols (2006), KMS readiness measurement can help an organisation to analyse whether it is capable of effective knowledge sharing.

The purpose of this research is to elaborate the readiness of knowledge management system. The model is based on t (Pradana, Kurniawati, & Ambarsari, 2015). Holt, Bartczak, Clark and Trent (2004) stated that there is KM Triad term to measure if the organisation's people, process, and technological infrastructure is ready. In this research the perspective is widened by adding the culture, process, and information technology from Ramadhan and Andrawina (2015).

Previous researches regarding knowledge management system readiness are Afifah, Andrawina and Kurniawati (2011); Agung (2014); Burke and Litwin (1992); Lee and Choi (2003); Razi and Karim (2010). Burke and Litwin (1992) focused on people, process, and technology factors. Lee and Choi (2003) focused on organisational structure, culture and IT infrastructure. Razi and Karim (2010) focused on culture, structure, people and Information Technology. Afifah, Andrawina and Kurniawati (2011) focused on KMS implementation by using three perspective which is people, process, and technology. Agung (2014) focused on KMS readiness for human resource consulting company.

In knowledge management, there are at least 3 perspectives that must be included in measuring readiness: people, process, and technology (Afifah et al., 2011). Previous research regarding the knowledge management system readiness does not completely include the three main perspectives. This research aims to elaborate previous research by adding the model from Ramadhan and Andrawina (2015) and including culture, process, and information technology.

LITERATURE REVIEW

Knowledge Management

Knowledge can exist with or without data as a competitive advantage for the organisation, and it is become important to understand the relation of data, information, and knowledge. Prusak and Davenport (1998) define knowledge as a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. According to Frost (2013), knowledge is divided into: tacit knowledge and explicit knowledge. Tacit knowledge is knowledge which is intuitive, hard to codified, and mostly based on someone's experience and stored in someone's mind. Explicit knowledge is knowledge which has been codified into documents or other media, so the knowledge is easy to be transferred and disseminated by someone or organisation. Knowledge management (KM) is about making sure that an organisation can learn, can share tacit knowledge and explicit knowledge, and that it will be able to retrieve and use its knowledge assets in current applications.

Knowledge Management System

According to Frost (2013), Knowledge Management System (KMS) is an IT-based system, which is aimed to be able to cache and retrieve knowledge, locate knowledge sources, develop collaboration among people, mine repositories for hidden knowledge, and capture and use knowledge. The major purpose is to facilitate the sharing and integration of knowledge. It can support many kinds of function including store, retrieve, calculate, capture and uses knowledge and anything that could enhance knowledge management process in all level of organisation.

Aydin-Tasci Readiness Scale

Aydin and Tasci (2005) developed a measurement scale to see if the organisation is ready. This scale uses data from questionnaires t and matched with the level of readiness provided by Aydin-Tasci. The questionnaire is coded from a scale of 1 to 5 from strongly disagree to strongly agree. The level of readiness by Aydin-Tasci are:

1. Index (1-2,59)

   The organisation is not ready to implement KM system thus organisation needs to do a lot of works.

2. Index (2,6-3,39)

   The organisation is readier to implement KM system but still needs to do some works.

3. Index (3,4-4,19)

   The organisation is ready to implement KM system but still requires a few improvements.

4. Index (4,2-5)

   The organisation is fully ready to implement KM system.

MATERIALS AND METHODS

The purpose of this research is to develop a knowledge management system readiness model. The model is based on the research from Pradana et al. (2015) that focused on the two perspective which is organisational structure and people. The perspective is widened by adding the model from Ramadhan and Andrawina (2015) which include culture, process, and information technology. Figure 1 shows the elaborate model of this research.

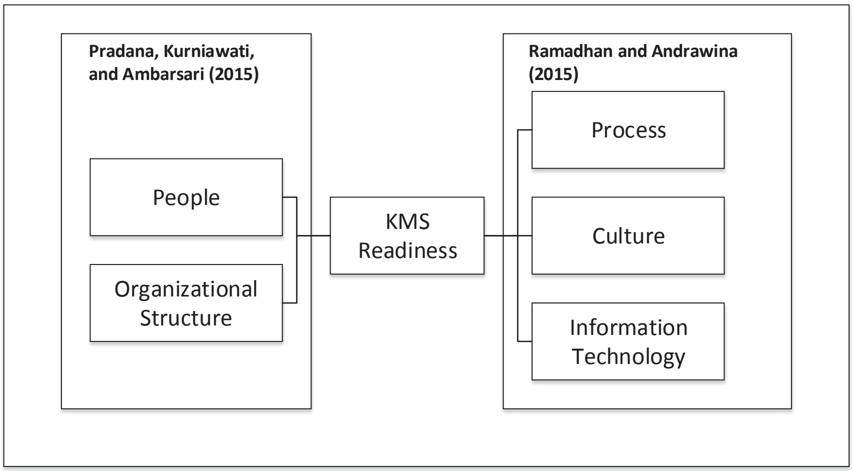

Figure 1. KMS readiness model

Previous research from Pradana et al. (2015); Ramadhan and Andrawina (2015) focused on research institutions, therefore both previous research can be combined to widen the perspective for this research. Questionnaires are used for data collection. The responses from questionnaires are measured using the 6-point Likert Scale to obtain the value of readiness to implement KMS based on a scale of Aydin and Tasci. The Likert scale then converted into interval data using mean successive interval. The result of the mean successive interval then matched with the Aydin-Tasci scale to give the organisation level of readiness for each dimension from a different perspective.

Organisational Structure

Organisational Structure defines an organized way to divide and manage tasks that supports knowledge management.

Organisational structure consists of decentralization and informal (Razi & Karim, 2010). Decentralization is defined as the degree of distribution of authority and control over the decision. Informal is defined as the degree of flexibility in formal rules, procedures, and standard policies.

Table 1
Dimension of organisational structure

Dimension	Definition
Decentralization	Degree of distribution of authority and control over decision
Informal	The degree of flexibility in formal rules, procedures and standard policies

People

People defined as a concept that define human, which are the main element of knowledge creation within organisation (Razi and Karim, 2010). T-Shaped Skills is defined as the diverse knowledge, skills, and competencies owned by a person Skills and competencies from a person can be combined with other disciplines and can create a new knowledge, this kind of person then will share the new knowledge to others within organisation (Lee & Choi, 2003). Task Requirements Individual Skills and Ability is defined as the compatibility between the skill and individual knowledge with the needs that must be possessed to complete the task especially to do knowledge management cycle (Burke & Lithwin, 1992).

According to (Razi & Karim, 2010) Effort Expectancy is dimension within the people, and it is is defined as the KM Degree of ease associated with the involvement in KM process. Performance expectancy is defined as the dimension which an individual believes that involving in KM process will help him/her to attain gains in job performance (Razi & Karim, 2010). Work unit climate is defined as a dimension of people which hope and relationship among the work unit that involves in knowledge management cycle and affects it (Burke & Lithwin, 1992). Motivation is defined as a Trend in the behavior of people within an organisation to take action to achieve particular goals. Such behavior can cause, direct, and organize behavior in an organisation, especially in carrying out the process of KM in daily activities (Burke & Lithwin, 1992). Leadership is defined as providing direction to employees and encourage implementation of KM (Burke & Lithwin, 1992).

Table 2
Dimension of organisational people

Dimension	Definition
T-shaped skill	Diverse knowledge, skills, and competencies owned by a person, where this knowledge, skills, and competencies can be combined with other disciplines, so it will result in new knowledge, and this kind of person will share the knowledge to other people within an organisation
Task requirements individual skills and ability	The compatibility between the skill and individual knowledge with the needs that must be possessed to complete the task especially to do knowledge management cycle
Effort expectancy	Degree of ease associated with the involvement in KM process
Performance expectancy	Degree to which an individual believes that involving in KM process will help him/her to attain gains in job performance
Work unit climate	The hope and relationship among the work unit that involves in knowledge management cycle and affects it
Motivation	The trend in the behavior of people within an organisation to take the necessary action to achieve particular goals. Such behavior can cause, direct, and organize behavior of people in the organisation, especially in carrying out the process of km in daily activities
Leadership	Leaders' behavior in an organisation in providing direction to the rest of the people in the organisation and encourage them to implement the KM process

Culture

Culture is defined as values espoused by an organisation to achieve a sustainable competitive advantage (Lee & Choi, 2003). Table 3 shows the operational definition of the cultural perspective. Collaboration is defined as the degree to which people in a group actively help each other in their works (Lee & Choi, 2003). Mutual Trust is defined as the degree of Trust among people within an organisation. Lee and Choi (2003) went on to say that mutual trust can be established in an organisation when every single person has a belief in integrity, capability, and other people's characters. Lee and Choi (2003) defined learning as a relatively permanent change in someone's behavior as a result of experience obtained. Management Support is defined as the support given by top managers for Knowledge Management by providing direction or instruction and resources (Razi & Karim, 2010). Organisation Strategy is defined as the degree of the link between organisational strategy and KM strategy (Razi & Karim, 2010). The reward is defined as the degree of relevancy between the rewarding system and the involvement in KM process (Razi & Karim, 2010).

Table 3
Dimension of culture

Dimension	Definition
Collaboration	The degree to which every individual contributes in helping others to finish their works in a group.
Mutual trust	The degree of trust among people within an organisation. Mutual trust will be able to grow when every single individual in the organisation has such belief in integrity, capability, and other people's characters.
Learning	A relatively permanent change in someone's behavior as a result of experience gained by someone
Management support	The degree of support from top managers for KM process through providing guidance and necessary resources
Organisation strategy	The degree of link between organisational strategy and KM strategy

Process

The process is defined as something that embodies the essence of the organisation (Bateson, 1979). Vision, Mission, And Strategy are defined as the vision of Documentation Center of Scientific Information and the approach used to achieve the vision, which can be the purpose of KM implementation (Burke & Lithwin, 1992). Policies and Procedures System is defined as the degree of match between the skills and knowledge of employees which are needed to complete a job, especially related to the implementation of KM (Burke & Lithwin, 1992).

Table 4
Dimension of process

Dimension	Definition
Reward	The degree of relevancy between the rewarding system and the involvement in KM process
Vision, mission, and strategy	The vision of PDII and the approach used to achieve the vision, which can be the purpose of KM implementation
Policies and procedures system	The degree of match between the skills and knowledge of employees which are needed to complete a job, especially related to the implementation of KM

Information Technology

Gold, Malhotra and Segars (2001) defined Information Technology as elements of the structural dimensions based in IT. It is required to enable knowledge sharing and knowledge creation for people working in an organisation. IT Support is defined as the degree to which knowledge management is supported by the use of IT (Lee & Choi, 2003). ICT Use is defined as the degree of extensive use of information and communication technology by the individuals in the organisation for KM initiatives (Razi & Karim, 2010).

Table 5
Dimension of information technology

Dimension	Definition
IT Support	The degree to which knowledge management is supported by the use of IT. IT facilitates rapid collection, storage, and exchange of knowledge on a scale not practicable in the past, thereby assisting the knowledge creation process
IT Use	The degree of extensive use of information and communication technology by the individuals in the organisation for KM initiatives

RESULTS AND DISCUSSION

The questionnaire is collected from 82 employees. In order to be a good measuring instrument, the validity and reliability test was done. The function of the validation test is ascertain if the questionnaires can serve as an instrument of measurement. Validity and reliability test result shows that all the dimension of the model are valid and can be used to measure readiness.

Valid and reliable questionnaire of KMS implementation readiness in research institution with 38 indicator questions is transformed into interval data using successive interval method. The average of each indicator will serve as the value of KMS implementation readiness. Figure 2 shows the highest perspective from the questionnaire is the people perspective with 3.27 and the lowest perspective from the result is the process perspective with 2.58. From the process perspective it can be seen a lot of work has to be done to achieve the desired readiness level. The organisational structure and culture perspective is at the desired level but needs an improvement in order to gain better level of readiness.

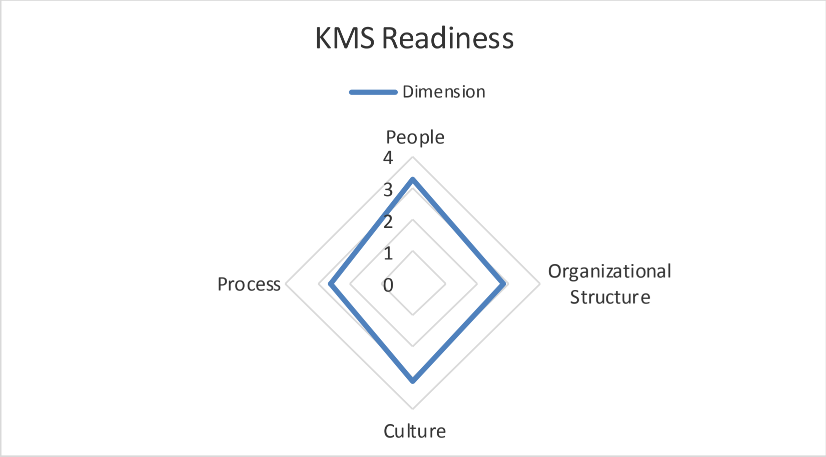

Figure 2. KMS readiness for the object study

Table 6 shows the questionnaire result for each dimension, from the table it is known that the lowest dimension is a reward. The result indicates that the object study is not ready to implement the KMS. Existing reward system is not capable of supporting the KM activities. The object study needs to make a reward system for the usage of KMS and KM activities.

Table 6
Average indicator per dimensions

Perspective	Dimension	Average of Indicator
People	T-shaped skill	3.246
	Task requirements individual skills and ability	2.886
	Effort expectancy	3.475
	Performance expectancy	3.598
	work unit climate	3.537
	Motivation	3.623
	Leadership	2.561
Organisational structure	Decentralization	2.786
	Informal	2.850
Culture	Collaboration	3.227
	Mutual trust	3.355
	Learning	2.796
	Management support	2.877
	Organisation strategy	3.2
Process	Reward	2.264
	Vision, mission, strategy	2.904
	Policies and procedures	2.683
Information technology	IT support	3.33
	IT use	3.565

The highest dimension is motivation, the eagerness of the employee to share the knowledge is relatively high. Innovation is the core process of learning and knowledge generation. With sharing and innovating eagerness, there is higher chance to get best practice to do organisation work from the learning process and to make that best-practice spread among employees. The motivation of employees to implement KMS is at the ready level while needed further improvements.

From the people perspective, the highest dimension is motivation to implement the knowledge management system is relatively good. organisation from the organisational structure, the highest dimension is informal, meaning that the procedure and informal communication while good needs to be improved. From a culture perspective, the highest dimension is mutual trust, trust is important in implementing a system and necessary to reach optimal levels. From a process perspective, the highest dimension is Vision, Mission, and Strategy. It is clear that the organisation needs to have a clear statement about the vision, mission, and strategy. From an information and technology perspective, the highest dimension is IT use. The use of IT in organisation needed to be improved, it can be done by using IT for operational activity such as shared document and generating a report by using a system.

From the overall assessment on KMS readiness, it is known that the organisation is not ready to implement KMS, In order to do so a Chief Knowledge Officer has to be appointed with responsibilities for promoting and introducing knowledge management system, coordinating knowledge management training, connecting and motivating employees to contribute to the knowledge management project. In addition a rewarding mechanism for those who are outstanding is also needed.

CONCLUSION

The purpose of this research is to elaborate on the readiness of knowledge management system. From the result, it is known that the lowest dimension is a reward (2.264) and the highest dimension is motivation (3.623). The overall average score of each perspective is 2.9 indicating that the object study is not ready to implement the KMS. To do so a Chief Knowledge Officer with responsibilities for promoting and introducing knowledge management system, coordinating knowledge management training, and connecting management and employees, needs to be appointed.. In addition there has to be a rewarding mechanism for outstanding performers.

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Creating Strong Brand through Storytelling on an Application-Based Transportation Industry

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ABSTRACT

This study looks at public relations in conducting brand storytelling. It discusses how to create a strong brand through storytelling. Public relations used employees' and customers' positive experiences to develop and communicate brand values through storytelling. The brand story must be consistent, compelling, and genuine. The use of social media in brand storytelling also improved public engagements, and it eventually made public feel that they are part of the brand. This research is a descriptive qualitative research.

Keywords: Brand storytelling, brand value, positive experience, public relations, social media

INTRODUCTION

Nowadays, a brand is not only a logo or a symbol that differentiates one to another. It is about the message. The message must be compelling, unique, and original on the specifics of a brand. The performance of a brand is not only measured by its newness and how it can fulfil new needs but more importantly, how it can tell the best stories (Mootee, 2013).

Based on the study conducted by Nielsen in 2012, 92% of consumers all over the world trust information recommended by their relatives, colleagues, and information delivered through online consumer review, and word of mouth. The number keeps growing 18% since 2007. In the Advertising Survey of the Nielsen's Global Trust towards more than 28,000 respondents of Internet user in 56 countries, customers' trust in the information conveyed through advertisements in the conventional media, such as television, radio and magazine

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decreased significantly from 2009-2011. Customers' level of trust towards advertisements in television decreased 24%; meanwhile in radio declined 20%. Compare to television and radio, level of customers' trust in the information in print media advertisements dropped 25% (Nielsen, 2012).

The data shows that advertisements in conventional media are no longer the sole source of information used by the public. Jim Yu, founder and CEO of BrightEdge, stated that customers preferred to gather information from their relatives, rather than information available on the marketing tools, such as advertisement (Yu, 2014).

The number of active Internet users in Indonesia according to We Are Social, there are 88.1 million active Internet users and 79 million of active social media users. The number has increased 15% over the past 12 months. Information about a brand can create what public see and think about the brand. What public sees and thinks of a brand is often called perception. According to Feldman (1999), as quoted by Sadaf (2011), perception was defined as a process of how someone uses senses and brain to work out, give meaning, and analyse various stimuli received (Sadaf, 2011). Thus, how the public sees and thinks of a brand depends on the information they receive and its interpretation.

Public relations is therefore responsible for delivering the right message through advertising. In addition, public relations must build and maintain trust (Prindle, 2011).

Conveying information about a brand through storytelling is performed by delivering a story that will create an emotional connection between the public and a brand. Public Relations must be able to create and deliver a story that is acceptable, both rationally and emotionally (Herskovitz & Crystal, 2010).

The objective of this study is to find out how storytelling is used to create a strong brand in an application-based transportation industry.

LITERATURE REVIEW

Brand Storytelling

Building a strong brand in a highly competitive market is not easy. Like a human being, a brand has identity, personality, and character. The brand owner should not only expose the functions of a brand but also its value (Mootee, 2013).

Humans are exposed to millions of information from different brands every day. It is also not easy for humans to remember data, but humans are better at remembering stories. Humans love to tell story based on their experiences. Storytelling is found to be a good tool to humanize an organization. The public starts to see an organization as something that is reachable and interactive (Pulizzi, 2012a).

Brand storytelling is can be a part of branding; it uses narrative to shape an image among customers (Fog, Budtz, Munch, & Blanchette, 2010). In creating an interesting and attractive story, the narrative can combine visual and audio, and use various types of platform, such as printed, electronic and social media. According to Chiu, Hsieh and Kuo (2012), as quoted by Du Plessis (2015), brand storytelling creates emotional associations to build a better understanding of a brand, and therefore, is considered as an effective way to communicate information about an organization to its target audience. More than that, the success of brand storytelling also depends on how the storytelling can focus on the brand persona. Brand storytelling must be able to focus on the personality of the brand that will eventually create an emotional connection between public and the brand (Herskovitz & Crystal, 2010).

Herskovitz and Crystal (2010) also emphasized that it is essential to unveil the persona when it comes to storytelling. The stories can be varied, but the persona must remain consistent. The persona will make the story of a brand even more real, and it will eventually create experience and emotional bonding with its audiences.

Denning (2006), as quoted by Du Plessis (2015), mentioned that to make a brand story effective, public relations has an important role.

The Role of Public Relations

In managing a brand, public relations is responsible for communicating anything related to the brand. According to Prindle (2011), public relations has two important roles in relation to managing brand, i.e. as the creator of the narrative – in this case, public relations will create and develop narrative that deliver information to the public; and the other role is to make sure that the appropriate media is used to deliver the narrative. Public relations creates brand awareness, promotes the brand, and at the same time, maintains a company's reputation thereby influencing public opinion and review of its ethics and values (Hynes, 2009).

MATERIALS AND METHODS

This study used a descriptive qualitative approach. Descriptive research focuses on the question of "how" and "who." This study focused more on describing how an event occurs, rather than on exploring new issues (Neuman, 2003).

Descriptive study uses various data collection techniques, such as surveys, field research, content analysis, historical comparison, or in some cases, it uses experimental research. Descriptive research also presents an overview of the details of an event, social setting, or relationship between the parties studied. In this study, the data collection technique was field research.

Descriptive research is similar to explorative research. In practice, these two approaches are often mixed. In descriptive research, the researcher begins with perfectly defined subjects and conducts research to describe accurately the subject. The result of descriptive research is a detailed description of the research subjects. Descriptive research offers an idea of various types of people or social activities. This study describes how to create a strong brand using storytelling and how public relations are involved in this activity.

In this research, data consists of (1) Primary data: primary research that required data or information from the main source, usually referred to as the respondent. Data or information obtained through written questions by using questionnaires or orally using interview method (Sarwono, 2006). There are also two types of primer data collection technique, as follows: (a) In-depth interview, according to Bungin (in Hamidi, 2007), it is a process of obtaining information for the purpose of research by conducting question-answer method between the interviewer and the informant or interviewee, with or without using the interview guideline, whereas interviewers and informants are engaged in a relatively long social life. In this study the interview method used is a direct interview; the authors communicated verbally with the person who becomes the source of data, without intermediaries, both about self and everything that Relate to himself; (b) Observation, is a method of collecting data by researchers to observe or record an event with direct testimony and usually the researcher can be a participant or observer in watching or observing an object of the event being examined (Ruslan, 2008). (2) Secondary data: secondary research used materials that are not from the first source as a means to obtain data or information to answer the problems (Sarwono, 2006). In addition to using interviews and observations, the secondary data is assisted with documentation. Documentation is a method of collecting data by taking data derived from the original document. The original document may be a graphic, table, or checklist and documentary (Hamidi, 2007).

This qualitative study uses in-depth interviews with the informants who are closely related to the topic of the study. According to Moleong (2007), informants are individuals who could provide information regarding the situation and condition of the research background. In this study, the informant used is public relations of an application-based transportation industry.

Data analysis is a process of organizing and sorting data into patterns, categories, and units of basic descriptions so that the theme can be found, and hypotheses can be formulated as suggested by the data. In this study, researchers used a narrative analysis method, focusing on the stories in everyday human life. In stories or narratives, people’s cultural complexities can be captured and spoken in the language. In this context, the story is not just a story, but rather a means to understand people and their world (Webster & Mertova, 2007).

Bogdan and Taylor (in Moleong, 2007), defined data analysis as a detailed process of formal effort to find themes and formulate work hypotheses (ideas) as suggested by data. It is an attempt to provide assistance to the theme and work hypothesis. The data analysis process begun by examining all available data from various sources, such as interviews, observations written in field notes, personal documents, official documents, pictures, photographs, and so on (Moleong, 2007).

According to Schofield, Covey-Crump, Stretton, Daymond, Knight and Holloway (2003), there are four ways to determine the validity and reliability in qualitative research: (1) Credibility refers to the acceptance of the research process and results by readers. Researchers continuously observed to see directly and explain the social phenomenon of the study. In this study, researchers conducted interviews, and verbatim coding to analyse accurately; (2) Transferability refers to whether the result of this study can be applied to similar contexts within the same population based on the findings acquired from the field; (3) Dependability refers to the consistency and accuracy of the findings. Started with the research design, data collection, data analysis, which are documented in the form of transcripts and field notes. The use of concepts to analyse data can conclude the study. Researchers must conclude the study based on the data which includes observations and in-depth interviews; (4) Confirmability refers to whether the research result can be verified, and accordance with the data collected. Confirmability is done by establishing the connection between data and its sources in order to draw conclusions. The researcher also includes the coding process of the transcript in the table format based on axial coding and selective coding.

RESULTS AND DISCUSSION

In this study, traditional transportation is defined as the non-application-based transportation industry. In the application-based transportation industry customers download the application on their smartphone.

The benefits offered by the application-based transportation industry are convenience, reliable, and simple. It is convenient because customers can place an order through the application with their smartphone. It is reliable because customers are informed of the identity of the driver (includes the driver's name, photograph, and contact number). It is simple because it offers several means of payment (cash, credit card, and customers can create an account to save some deposit that will be deducted when they use the service). Like a human being, this brand has a pleasant personality.

The company consistently communicates its values. As explained by Herskovitz and Crystal (2010), in telling a story about a brand, consistency is a must, especially when it comes to conveying the brand persona – the values held by a brand. The stability to convey the persona of the brand, i.e., convenience, reliable, and simplicity, can be recognized by public in many stories. For example, the experience told by the driver or the customers.

This research focused on the positive experience of employees and customers. It believes that brand values reflected through positive experiences will create a positive brand story. However, it is not adequate to create a compelling brand story that conveys the brand persona and an emotional connection between brand and public needs to be established. The meaning of the story has to be authentic and sincere. If the brand persona is an excellent form to create symbol, genuineness generates trust of the audience.

Apart from a compelling yet genuine story public relations add elements, such as photos, a bit of data or numbers, and audio to the brand story. These elements give more emphasis on the story and improve brand awareness. (Gunawan, Diana, Muchardie, & Sitinjak, 2016). It was found that even though the brand image is good, customers are likely to conduct brand switching because they are interested in trying alternative products after being exposed to good testimonials about competitor products on the Internet. The truthful story of a brand creates an emotional connection, and lead to the construction of a strong brand. A single story of customer's positive experience about the brand may not be able to convey the whole benefits of the brand (i.e. convenience, reliable, and simple), but at least, it could create an association for the brand, and can be recognized by other customers.

Regarding the role of public relations in creating strong brand using storytelling media can strengthen a brand. As stated by Prindle (2011), Public Relations' role in storytelling is to create and develop the narratives of the story and to provide the proper media to deliver the story. The implication of integrating new media in storytelling for public relations also is not only providing the narratives, but public relations are required to create materials faster and immediately. This new challenge includes obtaining approval from the top management. According to James (2007), the pressure to produce materials immediately with the required level of accuracy has created pressure within the relationship among public relations' team and the upper management, including the team from other division, such as the Information Technology (IT).

Public relations must form strong alliances with parties involved in the storytelling process. In this application-based transportation industry, to create a strong brand using storytelling, public relations must collaborate with different parties. As front-liners, drivers must be able to communicate the brand's values to customers that are convenient, reliable, and simple.

In addition to the fact that this business model is new the company wants the public to associate the brand with advanced technology and use social media to share the brand story. Social media can be a powerful method to deliver brand story and create strong emotional connection with the public. Posting and re-posting stories about a brand makes the public happy to associate with a brand.

CONCLUSIONS

This study finds employees' and customers' positive experience are used to communicate brand values through storytelling. It is believed that by communicating brand value and sharing them with employees' and customers' will create an emotional connection between brand and the public and improve brand knowledge. A strong brand is built on the strength of its persona.

The brand story must be consistent, compelling, and genuine. It is essential that the public feels the authenticity and sincerity of the story. Therefore, an honest and sincere story will create a strong and positive brand.

The role of public relations is to develop a narrative of the brand story using the positive experiences of the employees and customers and aligning them with. Adding visuals, graphics, and audio to the story strengthens the emotional connection between a brand and the public.

The use of social media in brand storytelling also improves public engagements, and it eventually makes them feel that they are part of the brand. Public relations can shape and lead the idea and narrative and through it ensure the alignment of the story with values of the brand.

It is recommended that the future studies should look at brand storytelling and the obstacles encountered by public relations in storytelling through social media.

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Does Environment-Serving-Organisation Concept Affect Firm Performance? A Strategic Perspective

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ABSTRACT

Pursuing the Environment-Serving-Organisation (ESO)-based view this research aims to investigate firm's capabilities in gaining competitive advantage at the automobile manufacturing industry. It shows that more formal and adaptable strategic planning and relevant synergy mentality based on the understanding of environmental turbulence level, helps maintain and increase a firm's competitiveness. Using structural equation modelling, business environmental turbulence from ESO-based view strongly and favourably affects a company's strategic planning and synergy mentality.

Keywords: Environmental turbulence, firm performance, strategic planning, synergy mentality, strategic aggressiveness

INTRODUCTION

Prominent scholars argue that basic theories of strategic management should involve Resource Based-view in which superior resources are fundamental to competitive advantage (Peteraf, 1993; Peteraf & Barney, 2003; Thompson, Peteraf, Gamble, & Strickland, 2014). The Environment-Serving-Organisation (ESO)-views a firm's competitive advantage will be at optimum when it firm matches the level of its management capabilities and strategic aggressiveness to its business environmental turbulence level (Ansoff, 1988; Ansoff & Sullivan, 1993). A company must analyse weak signals to better prepare its strategic planning to win competition (Hollopainen & Toivonen, 2012 ; Ilmola & Kuusi, 2006). The role of strategic planning increases as environmental instability grows (Brews & Purohit, 2007). How you and your rivals

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compete is the first step toward building and sustaining your competitive advantage (Sherman, Rowley, & Armandi, 2007). Collaboration is needed between strategy researchers and innovation, manufacturing and organisational behavior as well as with business history (Teece, Pisano, & Shuen, 1997).

It is commonplace to hear that firms need to build and sustain their competitive advantage to achieve long-term success, but in reality, it is very difficult for majority of local companies in one region to compete with more aggressive multinational companies. There are many stories of top regional local brands been taken over by established multinational companies for reasons such as new generation's failure to succeed, lack of financial engineering and management, lack of technology knowledge and invention, no sense of crisis and strategic plan, new government regulations, lack of expansion, and other relevant aspects.

Leading scholars in strategic management and environment-serving-organisation (ESO) concept such as Ansoff (1965, 1988), and Ansoff and Sullivan (1993) refer to the "environmental turbulence" as the changeability of environmental challenges consisting of the intricacy of the market and the knowledgeable of events. Companies will not be able to sustain their competitive advantages without having clear plans on how to compete under different environments and with the relevant top management and key managers' capabilities and distinct strategic behavioural styles.

Based on Miller and Friesen (1983), and Ansoff's (1988, 1993) research a firm strategic behavior is its response to the degree of changeability of environment challenges, and therefore the more turbulent the business environment the more aggressive should be the firm's response.

It is interesting that earlier research argue organisations or companies may be examined as information processing systems. The system's capability depends upon its ability to manage challenges from the environment (Miller & Friesen, 1983). The question is whether to stay aggressive and uncompromising. It appears that studies of business environmental turbulence and therefore the Environment-Serving-Organisation (ESO)-based view are not mentioned in this new decade. Earliar, some of researchers argue that the turbulence environment complicates the job of marketer and therefore marketing programs will have to be customized to individual clients with an emphasis on "one-to-one" marketing (Morris, Hansen, & Pitt, 1995); When the level of environmental uncertainty within an organisation is high then greater reliance on non-financial performance measures can increase performance (Hoque, 2005). The absence of stability in the environment requires firms to shape their paths through uncertain markets and adopting an entrepreneurial orientation as a strategic positioning maybe useful (Engelen, Schmidt, & Buchsteiner, 2015).

In this research the author elucidates the fundamental theories of environmental turbulence and the role of strategic planning. The author elaborates top management and key managers strategic aggressiveness that need to be aligned with environmental turbulence levels to achieve better sustainable performance levels.

In addition to in-depth interviews, the author provides the results of using Partial Least Square of Structural Equation Modelling to test the research-fit and explain the effects of each variable. The author argues the managerial implications on this research for the automobile manufacturing industry in particular.

LITERATURE REVIEWS

Environmental Turbulence (ET/MT)

The definition of this variable is a combined measure of changeability and predictability of the firm's environment (Ansoff & Sullivan, 1993; Moussetis, Rahma, & Nakos, 2005). Following Ansoff and Sullivan (1993) environmental turbulence is the external variable, focus on change, whose values specify the type of behavior necessary for success, and it is described by five different turbulence levels in the environment-serving-organisation-based concept. Each level requires different strategic behaviours and capabilities. On the other hand, the resource-based view believes that the controlled internal resources and capabilities should be the fundamental of business success. These two concepts, one is focusing on the external-unpredictable and the other from the internal-perspective, are indeed complementing each other.

According to The Environment-Serving-Organisation the business environment at level one is a situation of a very efficient product-market transaction, unchanging from previous condition, and smooth without any turbulence, and if there is a change, it will be very slow and therefore can be responded relatively easy by companies. At level two the change is still remaining slow but more frequent and company still can response on time before the shock materialized. At level three the change is becoming faster but the future is still a logical extension of the historical past, so companies can prepare before the blow.

The researchers then stated that companies must have a forward-looking strategy and then response can be planned earlier, and therefore the company is ready to cope with the turbulence. At level four, the change is not only fast but also come and off at an unexpected cycle, and therefore company must have not only forward-looking strategy but also an environmental scanning system should be in place to prepare strategic actions and reactions. At level five, change is moving so fast and also the future is unpredictable. It is very difficult to foresee what will occur in the future. Companies should therefore be better prepared to surprise its rivals and take advantage of the market.

Other turbulence concepts come from the marketing paradigm of market turbulence, competitive intensity, and technological turbulence from the model of Market Orientation (Jaworski & Kohli, 1993; Kohli & Jaworski, 1990). Market turbulence basically measures the tendency or the real changes of customer preferences over time. Competitive intensity asses the behavior, resources, and ability of competitors to distinguish and then technological turbulence items exploited the degree to which technology in an industry is in changing.

Miller and Friesen (1983) state that the extent to which changes in environmental challenges are actually correlated with changes in strategy making in order to achieve a high level of performance. Companies should change strategy if they are going to perform better than their competitors as and when the environment changes. The fundamental of the above-mentioned environment-serving-organisation-based view is actually aligned to the definition of competitive advantage (Peteraf et al., 2003). Ansoff has elaborated even further on product market growth strategies in his famous "Ansoff matrix" (1988, 1965) model, by including factors such as market penetration, market development, product development, and diversification strategies.

Strategic Planning (SP)

If one company fails to plan, it is planned to flop. Strategic Planning deals with the futurity of current decisions, is a process, an attitude, a way of life. A formal strategic planning system links 3 major types of plans namely strategic plans, medium-range programs, short-range budgets and operating plans (Steiner, 1979). Firms capable of concurrently acting and reacting are in a better competitive position than those that are unable to effectively change the objectives of their strategic plan to changes in the external environment (Dibrel, Craig, & Neubaum, 2014). Planners significantly perform better than non-planners (Ansoff, Avner, Brandenburg, Portner, & Radosevich, 1970), when instability increases planning degree should be aligning even the factors within management's control are stronger at explaining increases in planning than external environmental conditions (Brews & Purohit, 2007).

Scholars further argue that formal and incremental planning in unstable environments and provided evidence to reject the hypothesis that environment moderates planning type on an either/or basis (Oroh, 2016). An alternative hypothesis that planning in unstable environments includes both formal and incremental planning, and possibly other types of planning too, was thus supported (Brews, & Purohit, 2007). Based on the above we can hypothesize that there is a relationship between environmental turbulence or market turbulence and strategic planning. The greater the turbulence the environment or the market, the more comprehensive strategic planning is needed by the company to achieve a better performance.

Synergy Mentality (SM)

"The mindset" that more value is created by a combined performance between firm units compared to if the units worked by themselves (Hitt, Ireland, & Hoskisson, 2005). Synergy means working together in Greece word, and synergistic effect concept of "2 + 2 = 5" or value (a,b) > value (a) + value (b), and cost (a, b) < cost (a) + cost (b); Value of business unit a and b working together is more than the value if we add Business Unit a and Business unit b separately working; The cost of business units a and b working together will be Less than if they are separately working (Ansoff, 1965, 1988; Davis, Robinson, Pearce II, & Park, 1992; Rozemeijer, 2000; Wind & Mahajan, 1988).

From the above statements business units need to be combined first and will have more value than if they are not and therefore business units or companies have to be united and then merged under one (1) "synergistic" management. Simply saying synergy will not be fully enhanced without the "merging" different business units, or companies. Thus, key managers must first have a clear mindset that synergy is a must to do action to succeed and therefore they must have the knowledge and then clear plan to be implemented.

From the above, we can then hypothesize that the more synergy mentality indulges at top management and key managers the better the performance of the company will be. When business is running as usual nothing to change to gain a good profit and acceptable growth (at environmental turbulence level one) company doesn't need to have an opportunity mentality, but stability. In context of leadership, leaders need to have multiple identities and capabilities in order for the organisation to perform better (Anderson & Sun, 2015). Thus, we can argue that every environmental turbulence level needs to be approached differently and that the higher the level of turbulence the higher the level of synergy mentality level required between top management and key managers.

Strategic Aggressiveness (SA)

This variable is the response to the degree of discontinuity on the part of a firm's new products or services, competitive environments, and marketing strategies. It ranges from stable to reactive, to anticipatory, to entrepreneurial, and to creative (Ansoff & Sullivan, 1993; Moussetis et al., 2005). The response degree can be divided from stable (level one), reactive (level two), anticipatory (level three), entrepreneurial (level four), and creative (level five). The level of strategic aggressiveness is determined by two elements: the degree of change between a firm's successive strategic moves in the environment. The degree of change is categorized from zero change (level one), incremental change (level two), incremental 2 (level three), discontinuous familiar (level four), and discontinuous novel (level five). The second is the database used in choosing firm manager's moves or responses. The database is divided into historical precedents or example (level one), historical experience (level two), extrapolated (level three), future opportunities (level four), and creativity (level five).

Some scholars suggest Entrepreneurial Orientation as a firm's strategic behavior or response toward environmental challenges (Engelen et al., 2015). Other scholars argued that Entrepreneurial Orientation within organisations or firms is manageable; that is, an organisation is not per se entrepreneurial or not entrepreneurial, but the organisational culture is an effective lever in driving the degree of Entrepreneurial Orientation as an organisation-level behavior (Engelen, Flatten, Thalmann, & Brettel, 2014). They continued that there are four (4) forms of organisational culture and behavioural Entrepreneurial Organisation within the organisation namely Clan Culture, Adhocracy culture, Hierarchical culture, and Market culture. We can then argue that the more strategic the aggressiveness of the management, or the higher the strategic aggressiveness of the key managers the better the performance of the firm should be.

Firm Performance (FP)

An increasing number of scholars argue that not only financial accounting performance is necessary to measure a firm's effectiveness and efficiency to manage its resources but also the non-financial performance measures. Business performance was measured using two (2) distinct approaches which are judgmental as well as objective measures. The judgmental measure asks informants on their assessment of the overall performance of the business and its overall performance relative to major competitors. The objective measure is the dollar share of the served-market (Jaworski & Kohli, 1993).

Following the above statements we can hypothesize that there is a relationship between environmental turbulence (market turbulence) and the strategic planning of the company. There is also a relationship between synergy mentality and strategic aggressiveness. Without a clean mentality to work together key managers will not having strategic response to not only in different situation during high turbulence, but also in order to understand the on-going and the future business environment and then to properly react accordingly. We can then say that the more positive the synergy mentality the better the strategic aggressiveness of the key managers and therefore the higher the firm performance in the industry (the dependent variable).

Based on the explanation of environmental turbulence, strategic planning, synergy mentality, strategic aggressiveness and firm performance the following below research framework is proposed.

MATERIALS AND METHODS

Research Framework / Model

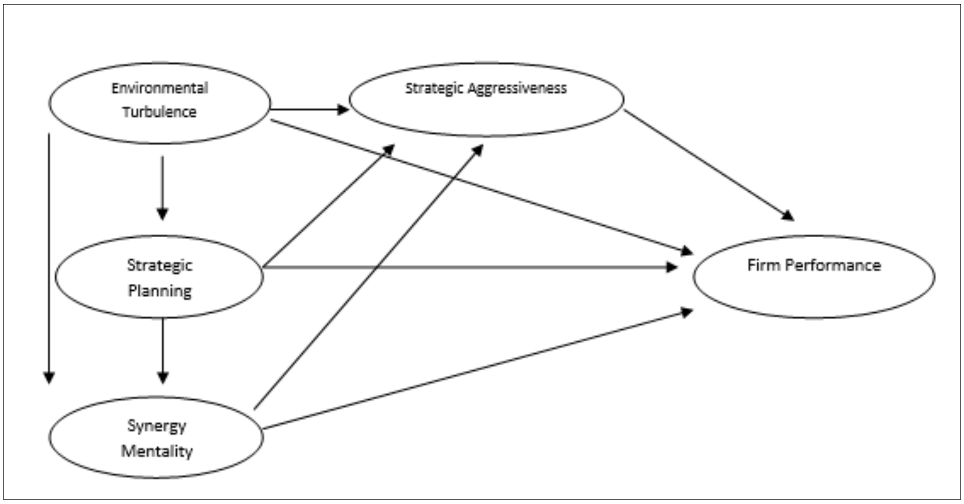

Figure 1. Research framework

Research Process

The author is using questionnaires to collect necessary data from the top management and key managers in the best automobile companies in Indonesia. During the process validity and reliability tests to ensure the data, variables and the model are valid, reliable, and fit is done. The Tests were done based on the Partial Least Square for Structural Equation Modelling. Results show that both variables, data and research model are fit.

Prior to testing the data in-depth interviews on more than 200 key managers and top management representatives at the best automobile companies in Indonesia was done. The goal is not only to ensure the questionnaires will be well understood but also investigate the company's top management skills and capabilities.

RESULTS AND DISCUSSIONS

The study uses Partial Least Square for Structural Equation Modelling (SEM) to check the Validity and Reliability of the data and the constructed research model.

Based on the Cross Loading at Table 1, the numbers showed higher results on each indicator used by the authors to measure Environmental Turbulence or Market Turbulence (MT), Strategic Aggressiveness (SA), Synergy Mentality (MT), Strategic Planning (SP), and Firm Performance (FP) in the proposed construct and therefore we can conclude that both the data and model are valid.

Table 1
Convergent validity test (Output cross loading)

	FP	MT	SA	SM	SP
FP	0,825772				
MT	0,0261	0,733348			
SA	0,0887	0,3165	0,730274		
SM	-0,0117	0,4365	0,7299	0,725259	
SP	0,548	0,2061	0,513	0,3758	0,772852

From the Overview Algorithm at Table 2, we can see the AVE (Average Variance Extracted) number of Firm Performance (FP) is 0.6819, Environmental Turbulence or Market Turbulence (MT) is 0.5378, Strategic aggressiveness (SA) is 0.5333, Synergy Mentality (SM) is 0.526, and Strategic Planning (SP) is 0.5973, and since those numbers are all ≥ 0.50 mean that all indicator probabilities are valid. The Reliability test result can be seen from the Composite Reliability numbers of all variables which are 0.8653 for Firm Performance (FP), 0.6992 (0.7) for Environmental Turbulence or Market Turbulence (MT), 0.8202 for Strategic Aggressiveness, 0.7654 for Synergy Mentality, and 0.8157 for Strategic Planning, and since all are > 0.7 then they are reliable.

Table 2
Overview algorithm (Construct validity and reliability)

	AVE	Composite Reliability	R Square	Cronbach's Alpha	Communality	Redundancy
FP	0,6819	0,8653	0,3634	0,7713	0,6819	0,0001
MT	0,5378	0,6992	0	0,1409	0,5378	0
SA	0,5333	0,8202	0,5993	0,7106	0,5333	-0,0058
SM	0,526	0,7654	0,2758	0,5409	0,526	0,0972
SP	0,5973	0,8157	0,0425	0,6585	0,5973	0,0273

Furthermore, from the Path Coefficient at Table 3 we can summarize as follows:

The Effect of Market Turbulence (MT) or Environmental Turbulence to Firm Performance (FP)

From the Path Coefficient table, the T Statistics number shows 0.0453 which are ≤ 1.96, we can conclude that Market Turbulence (MT) or Environmental Turbulence is not having a positive effect on Firm Performance (FP), and therefore the hypothesis of Market Turbulence or Environmental Turbulence having a strong positive effect on Firm Performance is not supported.

The Effect of Market Turbulence (MT) or Environmental Turbulence to Strategic Aggressiveness (SA)

From the Path Coefficient table, the T Statistics number shows 0.3989 which are ≤ 1.96, we can conclude that Market Turbulence (MT) or Environmental Turbulence is not having a positive effect on Strategic Aggressiveness (SA), and therefore the hypothesis of Market Turbulence or Environmental Turbulence having a strong positive effect on Strategic Aggressiveness is not supported.

The Effect of Market Turbulence (MT) or Environmental Turbulence to Synergy Mentality (SM)

From the Path Coefficient table, the T Statistics number shows 5.8718 which are ≥ 1.96, we can conclude that Market Turbulence (MT) or Environmental Turbulence is having a positive effect on Synergy Mentality (SM), and therefore the hypothesis of Market Turbulence or Environmental Turbulence having a strong positive effect on Synergy Mentality is strongly supported.

The Effect of Market Turbulence (MT) or Environmental Turbulence to Strategic Planning (SP)

From the Path Coefficient table, the T Statistics number shows 2.8281 which are ≥ 1.96, we can conclude that Market Turbulence (MT) or Environmental Turbulence is having a positive effect on Strategic Planning (SP), and therefore the hypothesis of Market Turbulence or Environmental Turbulence having a strong positive effect on Strategic Planning is strongly supported.

The Effect of Strategic Aggressiveness (SA) to Firm Performance (FP)

From the Path Coefficient table, the T Statistics number shows 1.5017 which are ≤ 1.96, we can conclude that Strategic Aggressiveness (SA) is not having a positive effect on Firm Performance (FP), and therefore the hypothesis of Strategic Aggressiveness having a strong positive effect on Firm Performance is not supported.

The Effect of Synergy Mentality (SM) to Firm Performance (FP)

From the Path Coefficient table, the T Statistics number shows 1.7863 which are ≤ 1.96, we can conclude that Synergy Mentality (SM) is not having a positive effect on Firm Performance (FP), and therefore the hypothesis of Synergy Mentality having a strong positive effect on Firm Performance is not supported.

The Effect of Synergy Mentality (SM) to Strategic Aggressiveness (SA)

From the Path Coefficient table, the T Statistics number shows 16.0079 which are ≥ 1.96, we can conclude that Synergy Mentality (SM) is having a positive effect on Strategic Aggressiveness (SA), and therefore the hypothesis of Synergy

Mentality having a strong positive effect on Strategic Aggressiveness is strongly supported.

The Effect of Strategic Planning (SP) to Firm Performance (FP)

From the Path Coefficient table, the T Statistics number shows 15.2915 which are ≥ 1.96, we can conclude that Strategic Planning (SP) is having a positive effect on Firm Performance (FP), and therefore the hypothesis of Strategic Planning having a strong positive effect on Firm Performance is strongly supported.

The Effect of Strategic Planning (SP) to Strategic Aggressiveness (SA)

From the Path Coefficient table, the T Statistics number shows 6.6151 which are ≥ 1.96, we can conclude that Strategic Planning (SP) is having a positive effect on Strategic Aggressiveness (SA), and therefore the hypothesis of Strategic Planning having a strong positive effect on Strategic Aggressiveness is strongly supported.

The Effect of Strategic Planning (SP) to Synergy Mentality (SM)

From the Path Coefficient table, the T Statistics number shows 4.8635 which are ≥ 1.96, we can conclude that Strategic Planning (SP) is having a positive effect on Synergy Mentality (SM), and therefore the hypothesis of Strategic Planning having a strong positive effect on Synergy Mentality is strongly supported.

Table 3
Path coefficient

Variable	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (|O/STERR|)
MT -> FP	0.002749	0.002319	0.060614	0.060614	0.045350
MT -> SA	-0.017086	-0.017885	0.042823	0.042823	0.398984
MT -> SM	0.375004	0.377851	0.063865	0.063865	5.871812
MT -> SP	0.206086	0.209732	0.072870	0.072870	2.828132
SA ->FP	-0.140416	-0.139333	0.093503	0.093503	1.501726
SM -> FP	-0.166795	-0.170074	0.093370	0.093370	1.786383
SM -> SA	0.632560	0.635375	0.039515	0.039515	16.007953
SP -> FP	0.682183	0.683838	0.044612	0.044612	15.291575
SP -> SA	0.278827	0.280344	0.042150	0.042150	6.615184
SP -> SM	0.298470	0.300011	0.061368	0.061368	4.863574

From the above findings especially that Market Turbulence (MT) or Environmental Turbulence is having a positive effect on Strategic Planning (SP), and therefore the hypothesis of Market Turbulence or Environmental Turbulence having a strong positive effect on Strategic Planning is strongly supported, as well as Strategic Planning (SP) is having a positive effect on Firm Performance (FP), and therefore the hypothesis of Strategic Planning having a strong positive effect on Firm Performance is strongly supported, we can strongly argue that Environmental Turbulence is indeed having a strong positive effect toward firm's performance. Thus, we can strongly infer that the more the understanding of Environmental Turbulence concept the better the performance of the firm.

Furthermore, from the Structural Modelling Path Coefficient (Figure 1, Appendix) we can also infer that Strategic Aggressiveness variable has a mediation effect toward Firm Performance variable from Environmental Turbulence variable since the T statistics from Environmental Turbulence is larger through Strategic Aggressiveness than directly on Firm Performance. A further study on this topic needs to be done.

Managerial Implications

The results prove and validates the Ansoff's (1970, 1988, 1990, 1993) school of Strategic Planning and the Environment-Serving-Organisation-based theory which stated that strategic planning had a strong positive effect on overall performance. A firm with a formal strategic planning will outperform its rivals, and those that match strategic aggressiveness and management capabilities to environmental turbulence level will sustain their competitive advantage. Indeed, the researched automobile companies have been the leaders in the industry for many years (Figure 2, Appendix). This research proves Environmental turbulence has a strong effect on Synergy Mentality, a key aspect in strategic management (Ansoff, 1990). Synergy Mentality also has a strong positive effect on Strategic Aggressiveness and Firm Performance.

From this research it is obvious that firm's top management, who understand the importance of Environmental Turbulence concept use it as the foundation of the company's strategic planning process. The performance of such companies are relatively more stable vis a vis competitors. On the other hand, most of the key managers in the company didn't recognize the existence of environment-serving-organisation-based theory, including environmental turbulence and strategic aggressiveness concepts. Thus, in this research it is not a surprise to find out that the effect of environmental turbulence to strategic aggressiveness and especially to firm performance is not significant compare to strategic planning. In general, top management and key managers who are not familiar and never use environmental turbulence concept will base their strategic decisions mostly on precedent and intuition to react to important changes in the industry and therefore having the tendency to use wrong and irrelevant strategies. The more aggressive they are the more problems will occur at later stage including a negative contribution to the firm competitiveness and overall performance. These are companies who will lose their strategic directions and at latter stage will be taken over by their rivals.

CONCLUSION

Environmental Turbulence Based view and analysis should be well understood and mastered prior to adjusting a company's strategic aggressiveness. Top management and key managers who rely too much on their marketing and production skills may find themselves unsuitable in a high business environment turbulence level. It can be said that only if the top management and key managers are mastering and implementing the basic concepts of business Environment-Serving-Organisation-Based concept which include the environmental turbulence level analysis, strategic aggressiveness, strategic planning and synergy mentality (and their appropriate levels, which should be aligned) then firm performance results can be satisfactorily maintained. Furthermore, following this research, it is essential for top management of automobile companies to notify their key managers and employees with updated information on what is actually taking place in the market. A relevant synergy mentality can be increase a company's competitiveness. Training on synergy knowledge, its measurement, and implementation in all business units should be properly planned and executed by the firm's top management. Regular training will change existing mindsets and working culture among key managers and employees, increasing management capabilities and firm competitiveness and performance.

Limitations and Directions for Further Research

This research is focused on a major leading company in the automotive industry in Indonesia. To enrich the research on strategic aggressiveness, strategic planning, and synergy mentality, more data should be collected from more companies at other industries. Different industry have their own special characteristics and cultures, a greater mix of industries can improve the research scope.

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Public Relations' Awareness of Corporate Reputation in Service Companies

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ABSTRACT

Reputation is one of the most important elements for service companies. There are two objectives of this study (1) to explore awareness of corporate reputation in 4-star and 5-star hotels; (2) to examine corporate efforts to gain corporate reputation in 4-star to 5-star hotels. The hotels studied are Grand Aston Yogyakarta (5-star hotel) and Swiss-Belinn Makassar Hotel (4-star hotel). The research uses a descriptive qualitative method; data was collected using semi-structured interviews and virtual observation. Results showed that both hotels are aware of corporate reputation in the service industry, and have implemented Grunig's two-way asymmetrical model. However, both hotels do not have a particular strategy and seem to be overwhelmed with the information in social media. Each hotel needs to implement social media policy and strategy to gain insight into stakeholders' feedbacks and current trends.

Keywords: Corporate Reputation, service companies, reputation awareness

INTRODUCTION

One of the main task of public relations practitioners is managing corporate reputation. Reputation is the most important element of a company, especially service companies. Without positive reputation, companies will find it difficult to be trusted by stakeholders.

Fombrun (1996) defined reputation as a perceptual representation of a company's past actions and prospects and describes the firm's overall appeal of its principal constituents when compared with other leading rivals. By definition,

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corporate reputation is the summary of how stakeholders perceive performances of a company. This definition proposes that a reputation is the synthesis of stakeholders' perceptions, and it creates a persona that can be formulated, implemented and managed (Neville, Bell, & Mengüç, 2005; Taghian, D'Souza, & Polonsky, 2015).

For service-based companies, high-quality service can provide an organisation with a competitive edge. A reputation for excellent service generates satisfied and loyal customers and favourable word of mouth advertising (Evans & Lindsay, 2013). Kandampully and Hu (2007) stated that there are two main components related to corporate image; the first is functional components such as the physical characteristics that can be measured and evaluated quickly. The second is emotional elements such as feelings, attitudes, and beliefs ones have towards the organisation. These sensitive components are the result of customer accumulative experiences.

Bennet and Kottasz (2000) set forth the historical dimension as a key forming characteristic that distinguishes the two. Corporate image was created in a shorter time compared to corporate reputation, hence the latter should be well thought. Jackson (2004) asserted that the main target of corporate image and corporate reputation is different. Corporate image targets consumers, while corporate reputation targets all stakeholders in organisations, like consumers, employees, investors, business partners, communities, and so forth. Furthermore, corporate reputation has been referred as a collective judgment of a corporation over time (Barnett, Jermier, & Lafferty, 2006). It requires deep thinking, and it is the result of the work of the organisation.

Reputation is a collection of images that often become intangible assets for the company. Although reputation is an intangible concept good reputation brings great profits to an enterprise. On the other hand, it will show how a company focuses on its business performance. Business performance can also be assessed based on industry norms, the historical firm's performance or established objectives and expectations (Herremans & Ryans, 1995; Homburg, Krohmer, & Workman, 1999; Thagian et al., 2015).

Based on the above description, it can be concluded that companies need efforts to maintain or increase corporate reputation. They also need to have higher awareness of the relationship between corporate image and corporate reputation. These efforts and awareness would be well-translated and focused on the target group concerned. This study will discuss awareness of corporate reputation in Grand Aston Yogyakarta, a 5-star hotel and Swiss-Belinn Hotel Makassar, a 4-star hotel.

The objectives of this study are: 1) To explore awareness of corporate reputation in 4-star to 5-star hotels; 2) To examine corporate efforts to gain corporate reputation in 4-star to 5-star hotels.

LITERATURE REVIEW

Public Relations and Reputation

Morissan (2010) gave a definition of public relations used by The British Institute of Public Relations, as an effort to build and maintain an understanding between an organisation and its publics. Morissan also stated that the scope of public relations included publicity, marketing, public affairs, issue management, lobbying, and investor relations. Using this definition, Grunig developed four types of the public relations model (Grunig, Grunig, Sriramesh, Huang, & Lyra, 1995), namely: (1) Press Agentry. The name derived from a press agent in the 19th century who worked to make headlines to persuade public opinion. Credibility and accuracy was not a priority in this model; there was a one-way communication from the press agents to the public; (2) Public Information, this model still relies on one-way communication, but message accuracy is the main factor to gain trust. This model ignores audience's profiles in the organisation message strategy; (3) Two-way asymmetrical. Audiences' feedback is becoming the main concern for an organisation. Although feedback was not used to enhance performance, it is mainly used to persuade public's behavior. The goals of this model are to create audience's psychological profile so that messages could be set up to gain reactions; (4) Two-way symmetrical is the ideal and ethical model. The goal of this model is to build dialogue between the organisation and their publics. Feedback was sought to enhance the organisation's performances. The models of public relations from Grunig are still relevant in today's digital era. Grunig (2009) stated that modern public relations practitioners were still using the 'old way' for the new media.

Managing Reputation and Performance

Sometimes corporate reputation is not well established with stakeholders, and it can develop into issues within an organisation. Companies need to know how to handle problems in organisations wisely to gain a positive corporate reputation. One of the strategic roles of public relations is how to manage the issue into something that can benefit the company. Prayudi (2007) defined issues as a discrepancy between public expectation and organisational practice. Issues can include problems, changes, events, situations, policies or values. Issues can be either positive or negative and if it is not managed properly will lead to conflict. Moreover, a prolonged conflict will ultimately become a communication crisis resulting in chaos. Conflict is occurred when there are parties that are pro and contra of a problem. The conflict becomes uncontrollable if there are parties that feel aggrieved by the existence of the conflict. On the contrary, well-managed issues will certainly have a positive impact of the company.

The understanding of issue management and knowing how to manage reputation will bring businesses to performance excellence. Issue management defined as an integrated approach to organisational performance management that results in

(1) delivery of ever-improving value to customers and stakeholders, contributing to be organisational sustainability (2) improvement of overall organisational effectiveness and capabilities (3) organisational and personal learning (Evans & Lindsay, 2013).

Hatch and Schultz (1997) argued for a link between reputation and performance; organisations need to align the internal and external views of corporate reputation. The arguments for alignment go beyond the cost-benefit of communicating similar messages to internal and external stakeholders, to the idea that how external stakeholders see the firm is linked to the views held internally, and that gaps between the two are potentially damaging to an organisation. A crisis can be caused by the internal values within an organisation differing substantially from the public's expectations. These differences can lead to conflicts resulting in demonstrations or negative publicity.

Prayudi (2007) sees that issue management is a management process where the main objective is to help maintain markets, reduce the risk, create opportunities, and manage the organisational image. It is done by anticipating, researching, and prioritizing issues. Besides, the organisation must also be able to see the impact on the issue. The result from this study is four approaches that can be used in analysing management issues, namely system approach, strategic reduction of uncertainty approach, rhetorical approach, and a new approach developed by Taylor, Vasquez and Doorley (2003), engagement approach. Prayudi emphasizes Public Relations need to explore management issues as additional expertise, as well as to be a plus for public relations practitioners. Yang and Grunig (2005) on reputation measurement systems in five Korean-based organisations suggested that relationship outcomes between an organisation and public lead to favourable representations of an organisation and positive evaluations of the organisational performance. The result reinforces the importance of corporate reputation.

Davies, Chun and Kamins (2010) stated that managing reputation by elevating employee perceptions Repeated Stem of a company's reputation above those perceived Repeated Stem by customers holds the potential to enhance future sales. Their study was conducted in nine service organisations in 2005. It can be concluded that alignment between internal and external perceptions of reputations is important, and a source of competitive advantage (Hatch & Schultz, 1997). Another study stated that conflict handling was one dimension that has a positive influence on customer loyalty (Hidayat, Zalzalah, & Ekasasi, 2016). Moreover, by focusing on employees and internal culture, organisations can achieve higher performance standards (Caesar, 2016).

MATERIALS AND METHODS

This research used a descriptive qualitative method. The qualitative method explores the way people interpret their social worlds and how they express these understandings

(Daymon & Holloway, 2002). It means the reality where people live is built up over time through communication. The qualitative research is a set of interpretive material practices that make the world visible. These practices transform the world into a series of representation, field notes, interviews, conversations, photographs, recordings, and memos to self. They study things in their natural settings, attempting to make sense of or interpret phenomena regarding the meanings people bring to them (Denzin & Lincoln, 2011).

The qualitative method was used to explore on how aware service companies about corporate reputation for performance excellence and examine corporate efforts to gain corporate reputation in service-based companies. Data were collected using semi-structured interviews and virtual observation through company's website, social media, and other online resources. Initial interview questions on how PR determined their stakeholders, what tools they used to communicate to their stakeholders, who were their target audiences, how to identify messages for external publics, were fielded. Moreover, interview questions related to handling issue, including how PR monitors issue in various media, how PR uses social media to communicate to audiences, and how they measure feedbacks. From these initial interview questions, this research developed findings.

Interview data were transcribed and coded based on respondent's answers and a data interpretation draft were prepared to validate the findings. After that, respondents were asked to re-read our written interpretation for confirmation.

RESULTS AND DISCUSSIONS

Swiss-Belinn Panakkukang Makassar is an international hotel located in Makassar, Indonesia, with the quality standards of Swiss-Belhotel International. Grand Aston Yogyakarta is a 5-star hotel located in one of the main roads in Yogyakarta, Indonesia. Both Swiss-Belinn Makassar, Grand Aston Yogyakarta are managed by Archipelago International (formerly known as Aston International).

This study is conducted by interviewing Senior Manager Public Relations in Grand Aston, Yogyakarta and Sales & Marketing Manager Swiss-Belinn Makassar. For Swiss-Belinn Makassar, public relations is responsible for taking care of promotion, overseeing feedback from clients, planning and implementing a marketing plan for the hotel. Messages issued by public relations to internal and external publics are always discussed internally. For creating a message to the external public, the target audience profile becomes the primary consideration for achieving the right target. Public relations at Swiss-Belinn Hotel are under the Sales & Marketing Division and are also in charge of monitoring the conversations in digital media, such as social media. If there were negative comments about hotel services, both in print and social media, it would be taken seriously as it relates to external perception regarding the hotel's reputation. When an issue begins to develop, such as negative comments on social media that are not yet addressed, the public relations of Swiss-Belinn Makassar Hotel must reach directly to the audience through various means and media. From the interview, public relations in Swiss-Belinn Makassar Hotel knows the importance of feedback for corporate reputation. The process of collecting feedback should be done directly, either through the guest comments cards or social media. Overall, feedback from visitors for Swiss-Belinn Makassar Hotel has been positive. For Grand Aston Yogyakarta, stakeholders are external stakeholders, including partners, media, individual and corporate guests, and the public at large. Grand Aston Yogyakarta determined these stakeholders through a series of surveys and observations. Anyone who needs intensive communication from the hotel can be categorized as key stakeholders. PR uses various media, including digital media, radio, newspapers, and TV, to communicate with these stakeholders. The target audience of each media also varies, thus radio is used for discussions with specific communities, and newspapers for advertising and TV for review and socialization of hotel programs.

PR in Grand Aston Yogyakarta can be defined into two types, (1) PR who is managed by head office in Jakarta and (2) PR in each property. Each unit within the hotel also performs PR functions primarily for image formation and enhancement through hospitality and excellent service programs. PR in Aston head office deals more with corporate communication, whereas PR in property helps more with hotel activities related to marketing, such as communicating products to consumers, partners, and media. Before each message was published, it should be approved by Unit Manager and General Manager. The existence of the two-stage approval is to ensure the outgoing messages have been under Aston's image and purpose.

Awareness of Corporate Reputation for Performance Excellence

To explore how service-based companies perceive corporate reputation, we will first see how they interpret their stakeholders. Freeman and McVea (2001) state that managers need to consider the values, sentiments, and expectations of their stakeholders. Both hotels defined stakeholders as those who have a significant influence on business continuity. However, when asked who the stakeholders are, there is a difference in perspective that Swiss-Belinn Hotel Makassar sees stakeholders as an internal public, such as the board of directors. In another hand, Grand Aston Yogyakarta defines stakeholders as external partners, such as radio and television, print media, guests, corporations, communities, Aston's chain and society in general.

Nevertheless, they both agree that public relations must know how to map issues and manage issues appropriately. Reputation in serviced companies is considered as very important. All parties within the company are responsible for the enterprise's reputation, especially public relations division.

Based on the research, both companies are aware on how to get the best corporate reputation. They realize to give excellent performance they need to evaluate results and secure feedback from stakeholders. In this feedback scanning, online and offline issues were not seen as separate entities. This is in line with Lim's opinion that in the urban community there is no difference between the online and offline world (Lim, 2015).

In Yogyakarta, for example, the hotel industry faces an excess of room supply caused by a great number of new hotel establishments. This condition leads to unhealthy competitions among existing hotels. Therefore, a moratorium of hotel establishment license needs to be implemented to maintain sustainability of business. PR in Grand Aston Yogyakarta must take part and manage the issue, since the moratorium would be beneficial to the hotel. Thus, PR in Grand Aston Yogyakarta conducted through research about the issue, from social conditions to corporate recommendations. This issue is discussed and routinely reported to management as well as to headquarters. In short, PR should first classify the issue, whether it was urgent, or whether should be addressed. Not every issue is worth for significant attention from public relations.

Information on the hospitality business, social life, and travel category are part of the Grand Aston Yogyakarta PR environmental scanning. If an issue is important and needs to be addressed, it is common for PR to seek third party involvement to resolve it.

According to Grunig (2009), public relations practitioners still use new media in the old way that is simply to provide information to the public rather than using it as a strategy to interact.

Both hotels have started using new media to build storytelling and improve engagement in online conversations. They agree that the use of digital media is significant when information needs to be released to the public within 1x24 hours after an incident. Based on the interview at Swiss-Belinn Hotel Makassar, social media it appears social media can form at least 60% of the hotel's external image. Grand Aston Hotel views social media as a "miracle." It helps a business grow faster than before. Companies find it easier to read trends and customer's behaviour.

Both hotels have also implemented the two-way asymmetrical model of Grunig. This model reads audience feedback for more efficient message-writing. Both Grand Aston Yogyakarta and Swiss-Belinn Panakkukang Makassar are aware of the importance of feedback, but feedback collection is only done to read trends in the community and to detect issues. In dealing with problems and managing image, this model is effective but needs to be studied its long-term effectiveness. PR can interact better with the audience with an effective message.

Corporate Efforts to Gain Corporate Reputation

In general, PR oversees social media monitoring, which includes listening to conversations and resolving questions or problems that arise in social media.

Therefore, PR in both hotels mostly uses a strategy of telling, listening, and responding for their social media management strategy. However, this strategy is not without a challenge. The constant development of social media and freedom of expression are the main challenges for PR.

To communicate with the target audience, PR in Grand Aston Yogyakarta relies heavily on social media, including Facebook, Line, company's website, and WhatsApp group. However, Swiss-Belinn Makassar uses Facebook, Twitter, Instagram, YouTube, and website. Social media is seen as a media campaign, a medium for acquiring feedback, reading trends, finding information, and searching for ideas for PR activities and continuous communication media. However, when asked whether they have a special strategy, both hotels claimed to have no particular strategy.

Constant technological development offers urban society plenty of media options to express their opinion. Digital media, including social media, became fragmented which pose a challenge for PR. To overcome this challenge, PR should be diligent, willing to learn, and always up-to-date. With the advancement of social media, PR must be ready for 24 hours, because no one can guess when negative issues will appear and whether it will be viral.

Feedback from audiences is considered necessary for evaluation purposes. Grand Aston Yogyakarta still collects qualitative feedback from the guest's comments card or social media feedbacks. There are plans to conduct a wide range survey in order to gain a more measurable data. These customer's feedbacks are still needed aside from social media analytics, since a good evaluation serves as the base for upcoming reputation management strategy.

The reputation of a hotel is considered the responsibility of all parties, from cleaning service to General Manager. Both hotels also have strict rules to maintain corporate reputation. The special assignment of PR is to scan feedback from the public because PR is regarded as the closest party to stakeholders. According to the results from the interview, public relations in the future will be even tougher, because, in the hospitality business, one hotel can be distinguished from other hotels only from its reputation.

CONCLUSION

Both companies are aware on how to get the best corporate reputation in the service industry. They realize to give excellent performance to the public they need to evaluate their results and require feedback from their stakeholder. While Grand Aston Yogyakarta prioritizes external stakeholders, Swiss-Belinn Makassar views internal stakeholders as their main concern. This perception of interested parties will influence how they scan feedback and map their issues. Both hotels have implemented the two-way asymmetrical model from Grunig. They have a clear understanding of their target audiences and the importance of feedback. However, the feedback was sought to create an appealing message, not dialogue with the audiences. Results showed that both hotels have prioritised in a different type of stakeholders which led to different translation of corporate reputation. The various perceptions of corporate reputations can lead to corporate issues or conflicts. So, it is better for organisations to focus on all their stakeholders and given the same effort to all of them.

It was found that PR uses a strategy of telling, hearing, and completing. To gain corporate reputation, they make several efforts, both online and offline, using social media, radio, printed media, and guest comments. PR is also in charge of listening to conversations in social media and resolve questions or problems that arise in the conversation. Social media viewed as tools for public relations, and both hotels intensively used several social media for this purpose. However, they do not have a particular strategy while corporate reputation is viewed as the responsibility of all parties, ranging from cleaning service to the general manager.

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Search Engine Optimization in News Production Online Marketing Practice in Indonesia Online News Media

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ABSTRACT

The number of online news media in Indonesia is growing rapidly yet media research, it is focused on its function as a tool of democracy. Like other businesses on the Internet, online news media needs to be open to innovation in the newsroom and know how to market their product through search engine optimization (SEO). This article adopts a constructivist innovation approach in the newsroom to understand the online news media production process that utilizes Search Engine Optimization (SEO). The research was conducted by ethnography method in three major online news media in Indonesia namely liputan6.com, detik.com and metrotvnews.com during January-March 2017. The research data was obtained from interviews with more than 30 journalists and observations in the newsroom. Results show that structure of an organization, work practice, and attitude influences the adoption of SEO in the newsroom.

Keywords: Indonesia online news media, innovation in newsroom, search engine marketing, search engine optimization (SEO)

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INTRODUCTION

The number of online news media is growing rapidly in Indonesia yet media research in general is focused on its function as a tool of democracy (Lim, 2002; Nugroho & Syarief, 2012; Yangyue, 2014). Until 2016, there are 43.400 online news media in Indonesia, although the number of online news media listed in the Press Council (Dewan Pers) is only 234 (Kuwado, 2016).

Currently, the news production process has changed considerably. In the digital age, one of the standard changes in news production is the greater emphasis on audience interest (Crain, 2008; Ross, 2017).

One indicator of the success of an online news media company is the number of Internet users it has (Kritzinger & Weideman, 2013). Online news media need high visibility in search engines because Internet users will seek information through search engines on a daily basis (Spink & Xu, 2000). Research says that most Internet users will only click the information on the first three pages of search results in search engines (Weideman, 2009 in Kritzinger & Weideman, 2013).

The use of SEO that utilizes the function of journalists raises the pros and cons of whether the journalist's web must follow the rules of journalism or SEO rules (marketing) in writing the news (Melia, 2015). This study was conducted to examine online news media journalists acceptance on practicing SEO in Indonesia.

LITERATURE REVIEW

Online News Media in Indonesia

Online news media is growing rapidly although conventional media is still the most important media in Indonesia (Nugroho & Syarief, 2012). The increasing number of Internet users from 88 million users in 2014 to 132.7 million users in 2016 supporting the development of online news media. The total penetration reached 34.9% of Indonesia's 252.4 million total populations (APJII, 2016).

Traditional media such as newspapers take a glance at this opportunity and provide their products in the online form (online newspaper) or convergence with online news media (Tapsell, 2014) in addition to the growth of media that has been established and grown as an online medium.

Online news media has a superior character than print media as it is fast, has low cost, and can reach unlimited geography provided Internet connection is available. In the worldwide web, online news media business can attract investors (Kritzinger & Weideman, 2013).

Nevertheless, like any other business, not everyone can run an online news media company. In Indonesia, online news media business raged in the late 90s, beginning with companies that already have print media such as Republika, Tempo, and Kompas (Margianto & Syaefullah, 2014). Development halted following the issue of dotcom bubble in America a the beginning of the year 2000 (Anggoro, 2012) to re-emerge such that in 2016, there are 43,400 online news media in Indonesia though does not reach 1% of the online news media that meet the requirements of the national press media (Kuwado, 2016).

Online news media is more open concerning its practice and innovation than traditional media such as print media and electronic media (Yunus, Budihardjo, & Hartanto, 2016). Digital era brings changes to journalistic practice which can have implications for market orientation and general marketing strategies (Frambach, Fiss & Ingenbleek, 2016).

Search Engine Marketing (SEM)

Online news media businesses sell traffic to the advertiser for revenue. According to the recent study, customer orientation is critical to company's performance (Frambach et al., 2016). Since its development, the media must know how to source advertisements to support their incomes (McChesney, 2016).

Online news media, as well as other companies that sell products on the Internet should invest in Internet marketing through search engines or search engine marketing (SEM). Internet users will seek information through search engines on a daily basis (Spink & Xu, 2000). This is the reason online news media websites are visible. There are two ways for a customer to find a business website via the search engine: through pay-per-click (PPC) listing and organic result listing (based on search engine optimisation-SEO) (Kritzinger & Weideman, 2013).

It is crucial for company names to be at the top of the SERP because according to Weideman, user behaviour showed that 91% of users ultimately view results only within the first three pages, 76% of searchers look only at the first page (Kritzinger & Weideman 2013). PPC guarantees the name of the company, who pays an amount of money, will be listed at the top of SERP. However, 60% - 86 % of search engine users will click on which are the natural result (SEO result) (Sen, 2005). Each search engine has its way to recognize and rank the website. Therefore, every company should choose the appropriate search engine to market its products. Most company focus on targeting Google because it is the most popular (Flosi, 2011 in Kritzinger & Weideman, 2013).

Search Engine Optimisation (SEO)

One of the most popular methods of search engine marketing (SEM) is search engine optimization (SEO). SEO methods performed by modifying the website to achieve a good ranking or relevancy in search engines (Sen, 2005) is considered as the most efficient.

Two factors that influence the result of SEO are the on-page factor and the off-page factor (Codina, Iglesias-García, Pedraza, & García-Carretero, 2016). The first is SEO that is controlled by the creator while the other is beyond the control of the creator. On-page factor carried out by SEO is used to know, which modifying website content such as title tags, meta-tags, heading tags, links, and other areas on their pages to make them more visible to search engines (Sen, 2005).

MATERIALS AND METHODS

The study presented here uses the theoretical framework of Paulussen and Ugille (2008) for researching the adoption of citizen journalism as a form of innovation in the newsroom. According to that research the innovation in the newsroom depends on three factors: newsroom structure, work practice, and attitude. Innovation in the newsroom framework is beneficial if it is applied to examine how the adoption of SEO in Indonesia online news media because

SEO in the newsroom is also a new thing (Giomelakis & Veglis, 2016).

The analysis is based on data obtained using ethnography method from detik.com, liputan6.com, and metrotvnews.com from January to March 2017. The selection of online news media is based on two reasons. The first reason for the highest page views in Indonesia (alexa.com, 2017). Detik.com came in the first place while liputan6.com ranked third for Indonesia's most visited online news media. However, metrotvnews.com was selected because of its popularity as one of Indonesia's online news media with the largest income despite having low page views.

Some of the topics for the interview were organizational structure, work practice, and attitude in implementing SEO. Observations were done at liputan6.com for one month, while in detik.com and metrotvnews.com each for two weeks. Using the innovation framework in the newsroom (Paulussen & Ugille, 2008), the research questions are: 1) How does the role of organizational structure affect the adoption of SEO; 2) To what extent the application of SEO in online news media working practice?; 3) How is online news media journalist representation of adoption SEO?.

RESULTS AND DISCUSSIONS

The study showed the l factors that influence the application of SEO in the newsroom. The organizational structure, work practice and attitude consecutively were examined to see the implementation of SEO in online news media companies in Indonesia.

Organizational Structure

To view the role of organizational structure in influencing the application of SEO, the author interviewed members of the newsroom (Franquet, 2014), i.e., micro level (journalist), meso level (editor), and macro level (management). However, in the interview process, it turned out newsroom members did not give enough answers to research questions. Newsroom members who are journalists did not understand the actual application of the technology and how to do SEO research, although they all understood its importance. Some hire SEO specialists while others rely on journalists to apply SEO in their writing.

Because the level of SEO implementation differs from each medium, one medium implemented SEO simply because it feels that all media apply it. This media does not want to be left behind but also has the belief that they can still survive without using SEO. However, the other media seriously implemented SEO. In the other kind of news media, all news will be monitored and must meet SEO rules. According to one editor in chief, the use of SEO is very helpful to know the demand of readers. The editor in chief said there is a daily discussion about which news to report. Moreover, News reporter's side said if the news is interesting but there is no kind of story on Google. Then, the team decided to throw the story away (Personal interview, 20 January 2017).

The numbers of the SEO specialist team rely solely on the role of the journalist or the special team. Of the three media, Liputan6.com is the media that maximize the application of SEO. Regarding human resources, Liputan6.com has SEO team that consisted of six people and recruited from the marketing department. The decision to use SEO has implications for production costs because SEO specialist salaries are relatively high than that of most journalists.

Practice

SEO is a marketing technique to attract Google, this method force journalist to involve journalists when applies new media. According to one editor, the use of SEO contains elements of coercion. The editor said there is a little coercion, “SEO is how you use words, magic words so the story could attract Google. It is the art of how to attract Google. The problem is when every online news media applies SEO then we are all going to write the same stories” (Personal interview, 16 February 2017).

In practice, the application of SEO consisted of two kinds of on-page optimization and off-page optimization. The journalist who wrote the story containing the title and the body with the recommended keyword from the SEO team did the on-page process. The journalists were trained on how to put these keywords in the news beforehand. The journalist at the editor level edited the story and then gave the tags for those keywords. After that, the editor uploaded the news via CMS (content management system).

Online news media that hire specialist SEO team did off-page optimization by doing backlinks news that has uploaded. The backlink is a web page that linked to other pages (Agrawal, 2016). In addition to backlinks, SEO team also performed campaigns and promotions on the home channel. The promotion was also done on popular sites in Indonesia such as Facebook (alexa.com, 2017), and Twitter. For promotions in these social media, the editor feels the need to take over this job because the link needs to be edited first. They considered SEO teams with marketing backgrounds do not have the ability in editing the story.

Attitude

The SEO implementation decision in the newsroom is a hierarchical management decision beyond the newsroom. This decision received years of resistance from members of the newsroom even though they were eventually compromised. One SEO specialist admitted that it took two years to convince the members of the newsroom to implement SEO. The SEO Specialist said that the newsroom members have a belief that a journalist has their ideals. Therefore, the SEO Specialists challenged them through their chief editor, and it worked out. It has been two years since they are following the SEO specialist’s recommendations (Personal interview, 31 January 2017)

In general, the role of journalists is to ensure that their material is readable by search engines. The problem of SEO is it is always related with the journalistic objectivity. The SEO specialists admitted that it was hard to convince the editorial team to use SEO because the results will not instantly appear. Implementation of SEO is not easy and requires patience (Kritzinger & Weideman 2013; Richmond, 2008). They also stated that there was a debate between the newsroom member and the SEO specialist. "(They said) it does not guarantee will bring good traffic then why we should apply it (SEO). (I said) We cannot see the impact instantly, but we will harvest the result in one or two months, it will have a long impact. It is more like an investment" (Personal interview, 31 January 2017). The SEO team can assure that the implementation of SEO did not mean quality is compromised (Melia, 2015; Richmond, 2008) as reflected in the increasing web site page views.

DISCUSSION

In general, SEO in the newsroom in Indonesia online news media companies is relatively new. As with innovations in other newsrooms, SEO in the newsroom opens opportunities for a new profession, in this case, the SEO specialist.

The SEO specialist realizes that each search engine has a different way of recognizing the website. Therefore, they decide to focus on Google search engines which are more widely used in Indonesia (alexa.com, 2017). Therefore, this study is limited to SEO studies that use Google as a benchmark.

The problem in applying SEO in the newsroom is not only due to innovation but also due to SEO is a search engine marketing strategy (SEM). For this reason, SEO innovation is not easy to apply in the newsroom. Members of the newsroom refuse to apply SEO because according to them it is contrary to the code of ethics of journalism, although it is expected to change over time.

CONCLUSION

Members at the newsroom of three Indonesian online news media understood the importance of SEO for their business development. However, the application of SEO in three media differed with organizational structure, work practices, and the attitude of journalists. Management decides to implement SEO as a benchmark for the success of their company to make the journalists participate as a marketer. The journalists are required to follow the rules of SEO for the news that they write to be easily recognized by search engines, in this case, is Google. Although compromised with the application of SEO in the newsroom but journalists are still authorized to use theirs in determining newsworthiness.

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A Study of the Tourism Area Life Cycle in Dieng Kulon Village

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ABSTRACT

This study discusses the potential of the Dieng Kulon Tourism village (central java province), as one of the National Strategic Tourism Areas in Indonesia, in the areas of attraction, accessibility, amenities, ancillaries, available package and activity. An observation method, was adopted to analyze 'tourist area life-cycle' (TALC) model. Additionally, in-depth interviews were subsequently were combined with secondary data. The research results indicated Dieng Kulon tourism village has the potential to develop as a National Strategic Tourism Area, and based on Tourist Area Life Cycle (TALC) model, Dieng Kulon Tourism village is in the development phase.

Keywords: Dieng Kulon village, National Strategic Tourism Area, Tourist Area life-cyclep

INTRODUCTION

In recent decades, the world tourism has grown significantly. The (World Tourism Organization [UNWTO], 2016) noted that in 2015, there were 1,184 million tourists, an increase of 4.6% from 2014, with total revenues of US $1.5 billion. It has a positive impact on income, employment opportunities, and more. However, Goeldner and Ritchie (2009) argued that tourism can also have a negative impact.

There has been a shift in tourism trends. Leksakundilok (2004) found tourism has transformed characterized by the development of modern mass tourism. Alternative tourism has been proposed to prevent overcrowding of tourist spots by emphasizing sustainability, in the context of the environment, economy, social aspects,

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and culture. Based on the principle of sustainability, different types of tourism such as indigenous tourism, pro-poor tourism, ecotourism, adventure tourism, educational tourism, to community-based tourism have been promoted (López-Guzmán, Sánchez-Cañizares, & Pavón, 2011).

In Asia, sustainable tourism, has become a buzzword especially in protecting local communities (Haya, 2008; Herman, Widiasari, Lasmy, & Hartono, 2016). There are ongoing debates on how to balance the benefits and the impact of tourism among its players such as policymakers, professionals, NGOs and researchers. One tourist destination categorized as being in the developing stage is Dieng Kulon tourism village. Dieng Kulon is derived from the Sanskrit word “DI” which means a high place or mountain and “Hyang” means heaven. So, Dieng Kulon means mountainous region where the gods and goddesses reside. The village is located at an altitude of 2093 meters above sea level. Dieng Kulon is famous for its famous temples that have been in existence since the era of Hindu kingdom. Dieng Kulon, with a land mass of approximately 337.846 ha, is scenic and is characterised by rolling hills, agricultural land, and protected forest areas in addition to Dieng Kulon craters/ lake, arts and cultural attractions. The village specialises in tourism and also hosts puppet shows and traditional dances, art, and culture.

Based on data from tourism village managers (Dieng pandawa, 2016), most tourists stay between one and two days. In total, there were 233,281 domestic tourists in 2016, a significant increase of 20% from the previous year. While 129,063 tourists stayed for two days, 59,532 of them stayed for more than two days. Meanwhile, foreign tourists, 3,412 of them stayed for one day, 2,171 stayed for two days, and only 620 tourists stayed more than two days.

Tourism development is expected to have a positive impact on the local community, both economically, socio-culturally while conserving nature. One concept that is being developed is community-based tourism (CBT). Many countries have introduced this concept as a strategy of development in rural areas that have the characteristics of a traditional agrarian industry. CBT is also a type of sustainable tourism that is concerned with the welfare of local communities (Gabito, 2013; Okazaki, 2008).

CBT is a concept that focuses on the active participation of local communities in tourism activities and shares profits from those activities (López-Guzmán et al., 2011; Suriya, 2010). Johnson (2010) added that CBT aims to improve economic, socials, and cultural rights of local communities. However, Okazaki (2008) stated that although many studies have revealed the benefits and importance of CBT, local communities must be enlisted to participate in it right from the planning, implementation and final management stages.

Based on this background, in general, this study aims to assess the potential of Dieng Kulon tourism village to be developed as a national strategic tourism areas. Specifically, the study will identify the potential at the Dieng Kulon tourism village based on the elements of attraction, accessibility, amenities, available packages, activities, and ancillary service. Furthermore, this study also determines the position of the potential of the Dieng Kulon tourism village in accordance with the tourist area life-cycle (TALC) development model (Butler, 2008).

LITERATURE REVIEW

Tourism Product

Travel destinations are important. According to Leiper (1990), destination is where tourist activity occurs by offering and services are that are characteristic of the place. The selection of destinations is strongly influenced by pull and push factors (Rittichainuwat, 2008 in Prayag, 2010).

A tourist attraction must have accessibility, amenities, and ancillary service (Cooper, Wanhill, Fletcher, Gilbert, & Fyall, 1993). But in subsequent studies, it has been proposed by Buhalis (2000), that the following attributes should be considered: attraction, accessibility, amenities, available package, activities, and ancillary service.

Attraction is a natural potential and traditional heritage.

Accessibility refers to transport, routes, terminals, and the vehicles available in the destination in order to access the tourism destination.

Amenities refer to whole facilities that support the tourism industry such as accommodation, eateries, restaurants, travel agencies handicraft shops.

Available packages refers to the tour packages that are arranged by the intermediaries such as travel agents or tourism bureaus.

Activities refers to a set of activities that can be done at the destination.

Ancillary services refer to facilities, such as banks, communication, post offices, hospitals, destination management organisations, and tourism bureaus.

Tourist Area Lifecycle (TALC)

The TALC was developed by Butler (2008) and provides an overview of the development of a tourism product that is divided into several stages: exploration, empowerment or involvement, development, consolidation, stagnation, decline, and rejuvenation.

Exploration

This phase is the initial stage of the development of a tourism product. This stage is marked by the small number of visitors, where most are classified as visitors who want to enjoy the adventure (adventurous visitor). Tourists who visit more use of facilities used by local communities, so the interaction between tourists and local people at this stage is very high.

Empowerment or involvement

In this phase more local people begin to provide the basic needs of tourists such as temporary shelter as well as dining and drinking facilities. Tourists can take advantage of resources owned by local communities or those specifically tailored to the interests of travelers.

Development

The development stage is characterized by an increase in the number of visits and the involvement of local communities tends to decrease.

Consolidation

In this phase the symptoms of consolidation can be seen in a decrease in the value of a destination. Although the number of tourists continues to increase, there is a decrease in value, which can be seen by increasing price competition.

Stagnation

Saturation is the stage where the number of tourist arrivals has peaked and destinations that start to become outdated, with negative social, economic, and environmental impact. From a business point of view, destinations at this stage only rely on repeat tourism. In this phase, it takes innovation to maintain the existence of a destination and avoid a decrease in quality or even destruction.

Decline

This stage refers to absences of new exciting and things for tourists. In addition, the destination is no longer popular for holidays but short vacations (during the weekend).

Rejuvenation

Rejuvenation refers to reviving the attraction of the place and giving it a makeover and new identity. This revitalisation will extend the life of a tourist destination for it to remain competitive.

MATERIALS AND METHODS

The field data collection was based on three techniques: in-depth interviews, observation, and inspection documents. Interviews were conducted with local government officials in charge of tourism, local community, and other stakeholders by using purposive sampling and snowball sampling (Ratna, 2010). The researchers was not involved in the observation and only functioned as independent observers of tourism stakeholders' activity in Dieng Kulon village. This technique was useful for obtaining actual data Dieng Kulon on the attractions, facilities, access roads, and activities in Dieng Kulon village. Furthermore, a qualitative approach was used in this study to study the nature, characteristics and relationships between elements of existing or a particular phenomenon (Kaelan, 2005). The TALC was used to analyse the data.

RESULTS AND DISCUSSIONS

Results

The potential of Dieng Kulon tourism village as one of national strategic tourism areas

The village of Dieng Kulon has great potential for tourism due to its cultural and natural tourist attractions.

Natural attraction

In the village of Dieng Kulon, its main tourist attraction is nature and culture. In general, the village has unique characteristics and abundant natural resources and offers attractions such as Kawah Candrodimuka, Kawah Slleri, Telaga Balekambang, Telaga Warna, Telaga Pengilon, Air Terjun Sikarim, Telaga Cebing, and kawah Sikidang.

Cultural attraction

Dieng Kulon has an appeal for art and culture lovers with dances, percussion art, and several other crafts that have now become the livelihood for local residents. Its art-related attractions are *Candi Arjuna, Candi Gatotkaca, and Candi Bima.* Traditional events are also hosted here such as Ruwat Rambut Gembel, Baritan, Festival Durian, Nyadra Gedhe, Parade Budaya, Prosesi Hari Jadi Kabupaten, Kuduran, Serayu Festival, and Pesta Parak Iwak.

Accessibilities

In general, accessibility is one element that connects tourists, tourist attractions, and other tourism facilities. Dieng Kulon is located strategically and the nearby cities are within easy reach including Wonosobo, Semarang, Banjarnegara, and Pekalongan.

It is also served by good transport facilities with Purwokerto as the main connecting route. The village is about 69 km from Purwokerto City, while it is about 179 km from Semarang City. However, accessibility to natural attractions is not very good and the government has to play a role in improving this. Lack of information about Dieng village's tourist attractions (heritage sites and traditional events) in the village are an obstacle as well. Therefore, publicity is vital.

Amenities

Amenities or tourism support facilities rely on multi-sectorial approach. There are stalls, traditional market, taxis located at the entrance of the village, and also a bus terminal, Tugu Yogyakarta, located in Yogyakarta district, about 157 km from Dieng Kulon village.

There are several constraints though such as lack of parking area (the quantity) and a less than optimal service for information on tourism activities around the various attractions. Similarly, the public toilet facilities are limited. As for tourists who want to spend the night or stay in the Dieng Kulon village, local communities offer accommodation in their homes, known as homestay which are not intended specifically for tourism.

Ancillary services

Dieng Kulon village is partly managed by the Pokdarwis Dieng Pandawa (tourism awareness group), and is directly under the supervision of Head of 'Pokdarwis' named Alif Faozi. There are multiple stakeholders (tourism players) involved both in the planning, managing, and monitoring of them are, namely Dieng Kulon village government and Dieng Kulon indigenous village.

Activities

Some of the tourist activities here include photography, recreation, cycling, hiking, meditation, and tracking.

Available package

Tour packages to Lake Toba are also available through various types of online travel agent (OTA) (Paketwisata Tour Dieng Kulon, Dieng Kulon Plateau, Wonderful Dieng Kulon, Dieng Kulon Tour) and through various travel plans such as TripAdvisor. The tour packages on offer are quite diverse, ranging from three days and two nights to two days and one night, and are according to the demand of tourists. In addition, package deals were developed through various social media such as Instagram, WhatsApp, and Facebook.

DISCUSSIONS

According to data, more than half of the tourists visited the village for a day. Local tourism helped to boost the revenue of local guides, photographers, travel agents, and car park operators in addition to contributing to homestay business.

In 2016, the demand for homestay increased by 29% compared to the previous year, generating about Rp.4,350.000 in profit while the revenue from eateries was approximately Rp. 75 million per month. There were 55 local tour guides who earned about 3 million per person. The eight local arts group earned a monthly income of Rp. 4 million per group. The 16 photographers earn about 2.5 million monthly, security and parking service earns an income of Rp. 2.2 million monthly , the 25 transport providers (bike, car and horses) earn approximate Rp. 2.3 million and, the six tent owners earn a monthly income of Rp. 2.5 million (see Figure 1 for details).

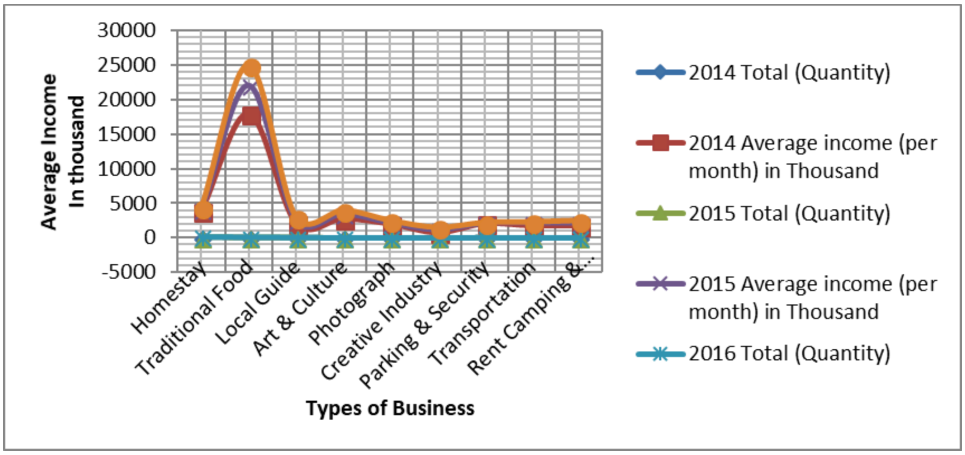

Figure 1. Tourism businesses at Dieng Kulon tourist village 2014-2016
Source: Primary data 2017

From the foregoing, it is clear Dieng Kulon tourism village is in the 'development' step. There is a steady number of visitors who stay there at least three days. Promotional activity is conducted through various electronic media and social media for its wider reach. A negative effect of all this is the role of local community who have been side-lined by external tour operators, in particular, big companies.

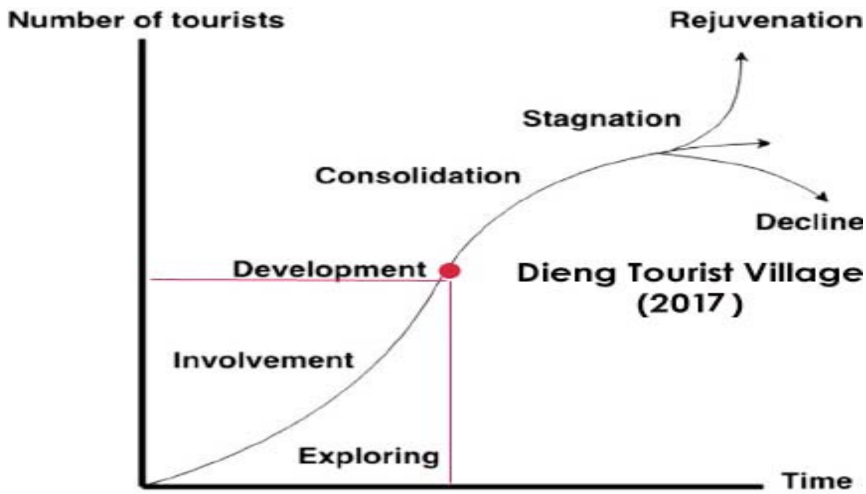

Figure 2. Tourist area lifecycle in Dieng Kulon tourist village
Source: Field research 2017

The right technology will enhance natural attraction and culture to accommodate the rising number of tourists.

CONCLUSION

This study found that in general, Dieng Kulon Kulon tourism village has a strong potential to be developed into one of the national strategic tourism areas in Indonesia. The availability of assets that can be utilized to deepen interest in cultural heritage and historical places. According to the life-cycle tourist area theory (Butler, 2008), Dieng Kulon Tourism village is in the development stage.

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The Analysis of Factors Which Affect Corporate Taxpayer`s Interest Using e-Filing System

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ABSTRACT

The purpose of this study is to examine the effects of performance expectation, quality system, and user satisfaction toward corporate taxpayers' interest using e-filing system. The population of this study were 1.733 corporate taxpayers who are registered with Tax Office of Central Jakarta as respondents, and the samples were 100 respondents from the population. This study uses a non-probability convenience sampling technique and data was obtained from questionnaires distributed to the respondents. The study shows the variable of performance expectations, system quality, and user satisfaction simultaneously have a significant effect on corporate tax payer`s interest using e-filing system and among those variables, the system quality is the most dominant.

Keywords: E-filing, performance expectations, quality system, user satisfaction

INTRODUCTION

Information and communication technology is being integrated to deliver better and convenient public services in various ways under e-governance. Governments around the world are increasingly integrating this technological development to reinvent public service and dissemination of information for better public administration under various e-governance initiatives. Technological advances has led to production of electronic devices to help in maintaining archives of important government documents. It helps offices to speed up the process of e-governance. The increase in number of taxpayers which are scattered throughout Indonesia requires high quality services,

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minimum time and cost involved in tax payment and minimum paper usage in the administrative process. Thus, e-filing system is vital. Mustapha and Obid (2015) stated that online tax system has received global attention through the development of information technology, which affects tax administration system.

The laws of Directorate General of Taxation number PER - 03/PJ/2015 about Procedures for Submission Tax Letter Notification Electronically, defines e-filing as an electronic system to notify the tax return for both individual or firm (corporate or organisation), as media to report tax payment through online system using internet or application service provider. The main objective of e-filing is to improve service for public by facilitating processing tax returns electronically via Internet. This application will reduce the cost and time required by the taxpayer to prepare, process, and submit his tax return on time (Sugihanti, 2011). Through this system, tax return reporting can be expeditious, convenient, and secure.

Gardner and Amoroso (2004) revealed that experience of using g internet impacts on one's interest in using internet. Wiyono (2008) examined tax payers who used e-filing in Indonesia. He reported the attitude of e-filing usage affects the interest of its user. A research about gender differences on social factors and their role in technology acceptance and usage through technology acceptance model (TAM) by Morris and Venkatesh (2000) revealed that information system and the environment have a significant influence in the usage of information system. Venkatesh, Morris, Davis and Davis (2003) reviewed and combined multiple models of system information acceptance. Their study showed that performance expectation, business expectation and social factor influence interest in Information Systems (IS), while interest and conditions influence system information usage.

Dewi (2009) conducted an empirical study on tax payers' acceptance of e-filing. She found perceived usefulness, perceived ease of use, complexity, voluntaries have positive influence on e-filing users. While, experience, attitude, security and privacy, design and content, and speed have negatively influence e-filing usage.

E-filing system operates online and real time system using internet media, through the application service provider's media or Application Service Provider (ASP). Users of e-filing are still quite a few as users of e-filing in KPP Madya Jakarta Pusat. It is caused by lack of socialisation of the DGT or the Taxpayer rejected the new technology in its tax reporting. Although already using E-SPT, the Taxpayer still encounters problems in reporting the tax manually due to the following: long queue which results in wastage of time, long, unable to synchronise the format of data that exist with their data format which is set by the System of Application Providers (ASP) and the Directorate General of Taxation system. Therefore, the taxpayer is expected to be conscientious and must understand how to use e – filing system. Therefore, the objective of this research is to analyse the effect of performance expectation, quality system, and user satisfaction toward corporate taxpayer`s interest in using the e-filing system.

LITERATURE REVIEW

Performance Expectation

Performance expectation measures how an individual will use information system if it can help him to improve his performance (Handayani, 2007). Venkatesh et al. (2003) defined performance expectations as to what extent one believes that using a system will help him to gain an advantage. Hamzah (2009) explained that this concept describes benefits in terms perceived usefulness, extrinsic motivation, job suitability and relative gain. In the context of e-filing system, performance expectation of e-filing user shows that the system is beneficial for the taxpayer.

System Quality

According to DeLone and McLean in Livari (2003) quality system is a characteristic or feature of desired quality of information system. DeLone and McLean (1992) explained that system quality includes the combination of hardware and software of information system. Kristin and Ekawati (2016) explained the quality of information systems affects the use of KM portal. The qualities of information system as promoted by Directorate General of Taxation are features, performance and user interface. According to Shannon and Weaver in DeLone and McLean (2003) quality of an information system is measured by a technical achievement. Technical level of communication is defined as the accuracy and efficiency of communication systems that generate information. Sharma and Yadav (2011) found that perceived ease of use, perceived usefulness, perceived credibility, and computer awareness significantly influence customer's acceptance of e-filing. The quality of e-filing can be measured by several indicators, such as ease of use, response time, reliability, flexibility, and security.

Customer Satisfaction

Livari (2005) reported an information system that can fulfil the needs of users will enhance user satisfaction. Some indicators are used to measure user satisfaction: Efficiency, Effectiveness, Satisfaction, and Proudness. Sugihanti (2011) stated that performance expectation, system quality, customer satisfaction significantly influence user's interest toward e-filing.

H1: The expectation performance has a positive influence toward corporate tax payer's interest using e-filing.

H2: The quality system has a positive influence toward corporate tax payer's interest using e-filing.

H3: Customer satisfaction has a positive influence toward corporate tax payer's interest using e-filing.

MATERIALS AND METHODS

The population of this study is 1733 of corporate taxpayers who are registered with Medium Tax Office of Central Jakarta. It uses a non-probability technique with the Convenience sampling method and questionnaire as a data collection instrument. The samples had a margin of error of 10%:

$$n = \frac{1733}{(1+ (1733)\ (0,1)^2)}$$

n = 95,677 rounded to 100

The variables of this study are performance expectancy, system quality, customer satisfaction, and tax payer's interest using e-filing and the answers were measured using a Likert scale ranging from 1 (strongly disagree), 2 (disagree), 3 (doubtful), 4 (agree), 5 (strongly agree).

Validity and Reliability Test

Validity was used to measure the questionnaire. If the corrected item-total correlation > r table, it means the data is valid (Ghozali, 2011). Reliability test is used to determine the consistency of results. . Construct or variables are said to be reliable if they value of Cronbach Alpha > 0.60 (Ghozali, 2011).

Normality Test and Classical Assumption test

The normal distribution test in this study used Kolmogorov-Smirnov Z value. Classical assumption test for linear regression model was to ensure that the model was free from multicollinearity, autocorrelation, and heteroscedasticity.

The regression model is shown on equation (1)

$$Y= \alpha + \beta1X1 + \beta2X2 + \beta3X3 + \varepsilon \quad (1)$$

Where:

Y = the use of e-filing by corporate taxpayers

X1 = performance expectancy

X2 = system quality

X3 = customer satisfaction

β1, β2, β3 = regression coefficients

ε = error

Following that, using α 5% the hypothesis will be tested statistically, while the t and F test use multiple regression.

RESULTS AND DISCUSSIONS

Respondents' Profile

The respondents' profile based on type of manufacturing were 15 with a percentage of 15%, and for banking respondent were two with a percentage of 2%, and for the trade and service respondent were to 73 with a percentage of 73%, while other types of businesses are dominated by financial institutions and non-banking respondent were 10 entities with a percentage 10%. Respondents in this study were dominated by those from the trade and services sector.

The respondents' profile based on the type of income tax return was 55% (or 55 respondents). Number of respondents with value added tax return with percentage of 10% was 10, while the respondents with income tax return and value added tax return with percentage of 35% were 35.

Descriptive Analysis

The result of descriptive statistical analysis is shown in Table 1. It shows the average value of respondents is greater than the standard deviation. It means the data has low variability.

The result of validity and reliability of data

Test validity of the data on variables produces a correlation coefficient greater than 0,197 which means the data is valid while the reliability test results obtained by Cronbach alpha > 0,6 which means the data is reliable.

Normality and classical assumption test results

By using Kolmogorov-Smirnov Z value, the result of asymp. sig. (2-tailed) value shows above α 5% which means all the variables are normally distributed (Table 2). Table 3 shows the results of multicollinearity test. The value of Variance Inflation Factor (VIF) less than 10 shows data is free from multicollinearity. Table 4 shows the Durbin-Watson score for autocorrelation test which point to the data being free from autocorrelation. The heteroscedasticity test use Scatterplot graph. Figure 1 shows data points are spreading and do not form a clear pattern. Classical assumption test result shows that the variables are free of multicollinearity, autocorrelation, and heteroscedasticity.

Hypothesis testing

Table 5 shows the results of the study which point to Performance expectation, quality system and customer satisfaction having a statistically significant effect on the use of e-filing by the corporate taxpayer. Additionally, quality system is the most dominant variable which influences the use of e-filing indicated by the highest Beta Standardised Coefficients.

Table 1
Descriptive statistics

	N	Min	Max	Mean	Deviation Std
Expectation	100	21	34	26.22	3.344
Quality	100	21	35	29.16	3.077
Satisfaction	100	17	34	27.70	2.904
E - Filing	100	22	33	28.36	2.497
Valid N (listwise)	100				

Table 2
The result of normality test One-Sample Kolmogorov-Smirnov test

		Unstandardised Residual
N		100
Normal Parameters a,b	Mean	0E-7
	Std. Deviation	2.23248049
	Absolute	.111
Most Extreme Differences	Positive	.062
	Negative	-.111
Kolmogorov-Smirnov Z		1.111
Asymp. Sig. (2-tailed)		.169

a. Test distribution is Normal.
b. Calculated from data

Table 3
The result of multicollinearity test

Coefficients[a]							
Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tol	VIF
Constant)	10.194	3.737		2.728	.008		
Expectation	.166	.070	.222	2.376	.020	.951	1.051
Quality	.265	.078	.319	3.411	.001	.952	1.051
Satisfaction	.220	.079	.256	2.794	.006	.994	1.006

a. Dependent Variable: E - Filing

Table 4
The result of autocorrelation test

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin- Watson
1	.448[a]	.200	.175	2.267	1.750

a. Predictors: (Constant), Satisfaction, Quality, Expectation
b. Dependent Variable: E-Filing

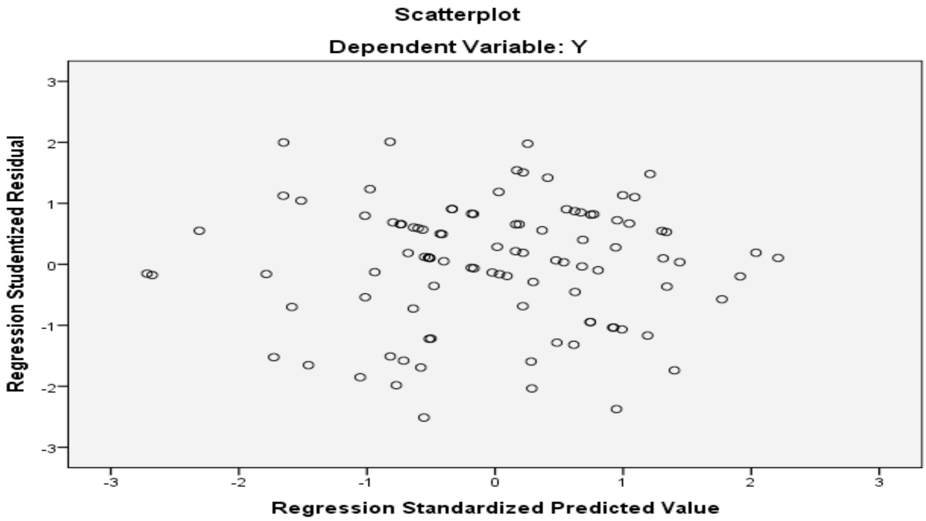

Figure 1. The result of heteroscedasticity

Table 5
The result of multicollinearity test

Coefficients[a]							
Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tol	VIF
Constant)	10.194	3.737		2.728	.008		
Expectation	.166	.070	.222	2.376	.020**	.951	1.051
Quality	.265	.078	.319	3.411	.001*	.952	1.051
Satisfaction	.220	.079	.256	2.794	.006*	.994	1.006

a. Dependent Variable: E - Filing
*Significant at 1% and 5% level
** Significant at 5% level

Performance expectation on corporate taxpayer's interest in using E-filing system

This study proves that performance expectation has significant influence on e-filing usage by taxpayers. Based on the result of t – test, t-count of 2.376 was obtained with a significant level of 0.020. Performance expectation is indicated by the ability of e - filing system to improve user productivity in completing tax reporting tasks, work effectiveness especially reporting using SPT, the system is available 24 hours, ASP provides electronic receipts in real time after users submit SPT with e-filing, e-filing can reduce expenses, improve the performance of tax reporting and generate information for decision making.

Without the expectation of e-filling performance, the corporate taxpayer will have difficulty paying taxes and submitting tax returns, which means he or she neglects their tax obligation. Sugihanti (2011) in his research entitled "Analysis Factors Affecting Tax Behavior To Use E-filing Empirical Studies on Corporate Taxpayers" showed performance expectations have a significant effect on the corporate taxpayers' interest in using e-filing system.

System quality on corporate taxpayer's interest using E-filing system

According to T – test, t-count is equal to 3.411 with significant level 0.001. Therefore t – count > t - table at significant level of 0.05. It proves system quality has significant influence on the corporate taxpayer. The quality of the system is indicated by the fact y e-filing system is used easily and conveniently by corporate user in reporting taxes and its does not require extra effort, ASP server (Application Provider Services) can be accessed quickly, easily and conveniently, e-filing system can respond and deliver confirmation quickly, e-filing system has security to protect confidentiality of corporate user data, the process of sending data to the Directorate General of Taxes (2015) contains no error even though the e-filing user submits large data size, flexibility for users in utilising tax reporting services, and a e-filing system provides sufficient information data for user needs. Therefore, improving quality of the system leads to an increase in usage of e filing by corporate taxpayers.

User satisfaction on corporate taxpayer's interest using E-filing system

In this study, user satisfaction has a significant influence on the use e-filing system. From the results of t – test, t - count was 2.794 with a significant level is 0.006. Users are satisfied e-filing system is effective for tax reporting and the ability of e-filing systems to provide pleasant experience for users. Other indicators are users use e-filing at all times, they find no difficulty in operating e-filing applications, they have a desire to continue using e-filing for the future, they save time in tax reporting, and they always use e-filing to report taxes because the features are beneficial. In the implementation of the e-filing system, users are satisfied with the e-filing system. If the level of user satisfaction is low, the user will not use the system in the future. This shows that user satisfaction is often used as a proxy for the success of an applied system.

CONCLUSION

This study investigated the effect of performance expectation, system quality, and user satisfaction on corporate tax payer's interest in using e-filing. It revealed performance expectation positively influenced corporate tax payer's interest in using e-filing. It shows that the belief in the benefits of e-filing will provide convenience, saves time in submitting tax returns, and assures security that confidential information is not leaked out – all these will drive corporate taxpayers to use e-filing.

Additionally, it was found quality system had a positive effect on corporate tax payer's interest in using e-filing. This finding suggests ease of operation, speed of access, reliability system, and security in the use of e-filing will affect interest of corporate taxpayers to use e-filing in submitting their tax return.

User satisfaction also had statistically positive effect on corporate tax payer's interest in using e-filing. Seddon and Kiew (1994) stated that customer satisfaction is the overall evaluation of user experience in using information systems. It is related to the benefits taxpayer can gain in using this system. These findings suggest that efficiency and effectiveness of the use of e-filing lead to greater satisfaction and pride in utilising e-filing for tax returns. In this information-communication technology era, governments are required to develop a reliable, fast and customised channel for service delivery under various e-governance initiatives. Future research should focus on other factors that influence the usage of e-filing by the government taxpayer, private taxpayer and state treasurer.

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The Impact of Job Satisfaction in Increasing Employees' Organisational Commitment in the Sharia Bank

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ABSTRACT

This study aimed to determine the effect of employees' job satisfaction on organisational commitment in BRI Sharia Bandung branch. Employing a quantitative approach, subjects of this research were 48 employees of Bank Rakyat Indonesia (BRI) Sharia Bandung branch. Data was obtained from questionnaires and which were measured using two variables: independent variables, i.e. employees' job satisfaction and dependent variable, i.e. organisational commitment. The type of research was verification, and the method used was an explanatory survey with probability sampling technique. Data analysis technique used was a verification analysis with simple linear regression. The findings showed that employees' job satisfaction affects their organisational commitment.

Keywords: Job satisfaction, organisational commitment, Sharia Bank

INTRODUCTION

Human resources in an organization play a very important role (Senen & Masharyono, 2015). In addition, human resources are also dynamic factors that can determine the progress and growth of an organisation (Masharyono, 2009). However, behaviours or attitudes of employees are very diverse, one of which is the commitment towards the organisation. Therefore, the role of the company in cultivating and maintaining employee commitment is very important because organisational commitment will enable achievement of organisational objective (Sutrisno, 2013).

Employee organisational commitment is important as it ensures they stay in

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the organisation and accept its values and goals (Ke, Qiu, & Jiang, 2015). In addition, employees who are committed to the organisation will consistently strive to ensure good performance (Khuong, Vu, & Nhu, 2015). Therefore, committed employees are less likely to leave the organisation (David, 2015).

Having committed employees is a boon for the company because highly committed employees will strive to work harder and perform better (Desler, 2013). In addition, employees will tend to be more actively involved in various activities of the organisation, more motivated to excel and have the desire to advance the organisation (Anugrah, 2014). Ke, Qiu and Jiang's (2015) showed organisational commitment is important as employees who are committed to the organisation will establish consider themselves as a permanent member of the organisation and will embrace the values of the company. Clinebell, Trijonyte and Reardon (2013) opined that committed employees are the least likely to leave the organisation.

Organisational commitment of employees is influenced by several factors: 1) culture of openness; 2) job satisfaction; 3) personal opportunities to flourish; 4) direction of the organisation; and 5) working rewards according to need (Top, Oge, & Gumu, 2015). Therefore, job satisfaction boosts the development of an organisation, because a good organisation should increase the level of employees' job satisfaction. Satisfied employees will increase the profit of the company and carry out all responsibilities wholeheartedly (Mangkunegara & Octorend, 2015). In addition, when companies ignore employee job satisfaction, they will be less motivated to achieve organisational goals, which will negatively affect other employees by creating a sense of indifference to the problems and difficulties faced by the organisation (Haddadi, Branch, Moghadam-, & Branch, 2015). Bailey (2016) found low job satisfaction would hurt the organisation, especially in terms of work productivity and the resulting output would not match organisational goals.

An employee's job satisfaction will have a positive impact on their work performance. A person with a high level of job satisfaction will show a positive attitude towards his work. Conversely, someone who is not satisfied with his work will show a negative attitude towards the work (Kartika & Kaihatu, 2010). In general, job satisfaction provides a sense of comfort and a positive experience to the employee. Job satisfaction can affect work behaviour which in turn will affect the performance of the organisation (Bakotić & Tomislav, 2013). In fulfilling their tasks, satisfaction must also be built by cooperating with each member of the organisation because it allows and helps individuals to develop their own creativity for productivity (Putra & Fibra, 2016).

Job satisfaction is a specific description of the job while organisational commitment refers to employee's attitude (Yaqin, 2013). Job satisfaction is a key factor for to achieve organisational objectives and ensure = loyalty with improved services and better performance (Waqas et al., 2014). In addition, job satisfaction reflects a person's feelings towards his or job, which is evident in the employee's positive attitude towards the job and work environment. Thus, the personnel department or management must constantly ensure job satisfaction, as it affects absenteeism, labour turnover, morale, grievances and other vital personnel issues (Putra & Wibawa, 2015). Therefore, high employee job satisfaction, will improve company performance (Shahab & Nisa, 2014).

Low organisational commitment is related to lack of job satisfaction. This area needs improvement as companies will face obstacles to achieve its goals if otherwise (Novianti & Senen, 2016). Employees with low levels of commitment tend to do poorly, are less likely to come to the office and have poor relationships with their colleagues (Miarkolaei & Miarkolaei, 2014). Poor commitment is reflected by job resignation, ignoring problems, be silent and display a lack of initiative (Wibowo, 2014).

Therefore, organisational behavior is vital to improve organisational commitment in the company under study. The purpose of this study is, then, to show the effect of employees' job satisfaction on organisational commitment.

LITERATURE REVIEW

Organisational Commitment

Organisational commitment is viewed as a positive feeling of employees towards the organisation. It is a feeling pride as a member of the organisation so the employees are willing to work hard to achieve organisational goals (Armstrong & Taylor, 2014). An employee who is committed to the organisation will accept the values and goals of the organisation (Luthans, 2011) and the employee's desire to remain part of the organisation (Osborn & Uhl-Bien, 2010). There is less turnover in companies which have highly committed employees (Kalkavan, Katr, & Nl, 2014). Likewise, organisational commitment deals with very important work-related factors such as employee absence, employee turnover and employee performance (Alkahtani, 2011; Mowday, Porter, & Dubin, 1974; Mowday, Steers, & Porter, 1979; Romzek, 1990).

Factors influencing organisational commitment are 1) work experience; 2) job satisfaction; 3) salary; and 4) relationships with superiors and co-workers (Helriegel & Slocum, 2011). In addition, factors that may increase organisational commitment are 1) extrinsic rewards; 2) clarity of role; 3) participatory management; and 4) organizational culture (Griffin & Moorhead, 2014). Thus, in this study, only one variable is chosen because employee job satisfaction is very important in an organisation. Likewise, highly satisfied employees will contribute fully to increase the profit of the company and carry out all their responsibilities wholeheartedly (Mangkunegara & Octorend, 2015). In addition, when employees lack job satisfaction, the organisation is at loss because employees will be less motivated to achieve their organisational goals, so it will have a negative impact on other employees by creating a sense of indifference to the problems and difficulties faced by the organisation (Haddadi et al., 2015). Bailey (2016) reported that low job satisfaction would hurt the organisation, especially in terms of productivity and the resulting output would not match what has been set by the organisation.

Hence, organisational commitment will provide a competitive advantage for the organisation. Employees who are able to trust and accept the value of the organisation will be more willing to work hard to reach the goals of the organisation and will be more committed. High organisational commitment will be beneficial to an organisation because employees value and are loyal to the organisation (Yeh, 2012).

From the foregoing, it is clear commitment is closely related to employee's work performance. The components of organisational commitment based on Luthans (2011) are:

1. Affective commitment which involves the employee's emotional attachment to, identification with, and involvement in the organisation.
2. Continuance commitment involves commitment based on the costs that the employee is associated with when leaving the organisation. This may be because of loss of seniority for promotion or benefits.
3. Normative commitment involves employees' feelings of obligation to stay with the organisation because they should; it is the right thing to do.

Job Satisfaction

Job satisfaction is the individual feeling and belief that they have with regards to their current job and it becomes one of the most important attitudes in an organisation. Job satisfaction has the potential to influence behaviour in organisations (George & Jones, 2012, p. 71).

The definition of employees' job satisfaction proposed by Osborn and Uhl-Bien (2010) is that employees' job satisfaction is an attitude that reflects the evaluation of a person's work or work experience at a certain time. Mullins (2010) states that job satisfaction is the attitude and feeling of an employee to the organisation. Further, Griffin and Moorhead (2014) report job satisfaction reflect the extent to which people find satisfaction or fulfilment in their work. Job satisfaction indicates that a person will feel satisfied if factors such as individual needs and aspirations in determining their attitudes are met, either together in groups or organisations.

Job satisfaction is an affective or emotional response to various aspects of one's work (Kreitner & Kinicki, 2001; Wibowo, 2014). This definition shows that job satisfaction is not a single concept where one can be relatively satisfied with one aspect of the job and not satisfied with one or more other aspects. Job satisfaction reflects the extent to which individuals find fulfilment in their work. In addition, job satisfaction is associated with how large an employee will remain in the organisation and low turnover (Helriegel & Slocum, 2011).

Soegandhi, Sutanto and Setiawan (2013) state that job satisfaction would be related to work. Effective work requires a certain skill according to their respective fields. Employees whose jobs specifications are out of their expertise would find their job difficult, which would likely to reduce their job satisfaction. So, employees prefer a job that gives them the opportunity to use their skills and abilities to carry out tasks, freedom and feedback about how well they are doing the job (Kartika & Kaihatu, 2010).

Dimensions associated with job satisfaction by Gibson (2012) that there are four dimensions of job satisfaction namely:

1. **Job.** The extent to which job tasks are considered interesting and provide opportunities for learning and for accepting responsibility.
2. **Pay.** The amount received and the perceived equity of pay.
3. **Promotion opportunities**. The availability of opportunities for advancement.
4. **Co-workers.** The extent to which co-workers are friendly, competent, and supportive.

MATERIALS AND METHODS

This study was aimed at finding out the description of employee job satisfaction and organisational commitment. Independent variables found in this study were employees' job satisfaction. The dimensions were job, pay, promotion and co-worker. Meanwhile, the dependent variable was organisational commitment. The dimensions were affective commitment, continuity commitment, and normative commitment.

The object of analysis in this research was BRI Sharia Bandung branch. This research was conducted in less than one year, so the data technique used in this research was a cross-sectional method. The type of research d was verification, and the method used was an explanatory survey with sampled 48 employees. Data was collected through questionnaire and analysed using simple linear regression.

RESULTS AND DISCUSSIONS

In this research, the influence of employee job satisfaction on organisational commitment in BRI Sharia Bandung branch Citarum was studied. Simple linear regression was conducted to test whether or not there was a free effect on bound variance. The linearity test in this study used the SPSS 21.0 for windows, then the following regression coefficient was obtained.

Table 1
Linear regression model employee satisfaction against organizational commitment

Coefficients[a]					
Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	48.035	6.749		7.118	.000
Employees' Job satisfaction	.326	.075	.538	4.328	.000

a. Dependent Variable: Organization Commitment

Based on Table 1 in column B, the constants and the values of simple linear regression coefficients for independent variables are listed. Based on these values, a simple linear regression model expressed in terms of equations are expressed as follows:

Y = 48.035 + 0.326 X Job Satisfaction

Based on simple linear regression equation, a constant value was equal to 48.035 which means if there was no job satisfaction among employee, organisational commitment was 48.035. Regression coefficient on employee job satisfaction variable was 0.326 which meant that every additional value of employee job satisfaction would increase the organisational commitment by 0.326. Conversely, if there was a decrease in organisational commitment, employee job satisfaction would decrease the organization's commitment by 0.326 one unit of value.

The influence employee job satisfaction variable and organizational commitment variable can be seen from the value of R-Square that can be seen from the value of Beta in Table 1 that was equal to 0.538. So, the following formula is proposed:

KD = r^2 x 100%
= r^2 x 100%
= $(0.538)^2$ x 100%
= 0.2894 x 100%
= 29%

Based on the calculation of the coefficient of determination with the above formula, the coefficient of determination for employee job satisfaction of organisational commitment was 29%. In other words, 29% of the organisational commitment was influenced by employee job satisfaction while the rest were influenced by other factors outside of employee job satisfaction ignored by the researcher.

This study aimed to examine the effect of employee job satisfaction on organisational commitment. F test was conducted by comparing between F count and F table.

The results of hypothesis testing using SPSS 21.0 for windows software help are shown in Table 2 below.

Table 2
The significance value of Anova F Test

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	628.856	1	628.856	18.734	.000[b]
	Residual	1544.123	46	33.568		
	Total	2172.979	47			

a. Dependent Variable: Organization Commitment
b. Predictors: (Constant), Employees' Satisfaction

Based on the above table, the F test taken from Anova with probability level (Sig) = 0,000, then a significant level of 0.05 was 0,000 ≤ 0.05. Thus, Ho rejected. This means employee job satisfaction positively affected organisational commitment at BRI Sharia Bandung branch. The influence of independent variables together with the dependent variable was tested using test F that was F_{count}> Ft_{abel}. F_{tabel} with 48 respondents was at α = 0.05 is 4.05. Hence, 18.734> 4.05, which means Ho was rejected. All in all, it can be said that employee job satisfaction influences organisational commitment.

Therefore, employees' job satisfaction has a significant/positive relationship to organisational commitment. This is supported by Altinoz, Cakiroglu and Cop (2012) that there was a positive and significant relationship between job satisfaction and organisational commitment. They added that job satisfaction was effective for all dimensions of commitment. Employees who are satisfied with their organisation and work, will be committed to their organisation, and hence, they will continue to work for their organisation.

Zehir, Müceldili and Zehir (2012) stated there is a positive relationship between the dimension of job satisfaction with affective commitment and commitment sustainability. The higher the employee job satisfaction, the higher the commitment of employees to the organization is. This is supported by Kalkavan et al. (2014) who found that job satisfaction has a positive effect on organisational commitment. Improved job satisfaction reduces turnover rates and creates a strong positive perception of organisational commitment. The results of Sohail, Safdar, Saleem, Ansar and Azeem (2014) show there is a positive relationship between job satisfaction and organisational commitment because committed employees will do a good job and will be satisfied compared to others. This was corroborated by Ismail, Azman and Razak (2016) that employee satisfaction has a positive and meaningful relationship with organisational commitment. Employees who are satisfied with intrinsic and extrinsic satisfaction from their work conditions will display greater organisational commitment.

Helriegel & Slocum (2011) state that employees' job satisfaction is very important for the company. Job satisfaction is associated with employees' willingness to stay on their job (which results in low turnover for the company). Employees who are satisfied with their work will work diligently, while those with low job satisfaction will show high absenteeism, delay in meeting deadlines, and have compromised lower mental health. Similarly, Anugrah (2014) found that performance and success of a person are determined by their level of competence, professionalism, and commitment in the field he is engaged in. Organisational commitment will be greatly influenced by the level of job satisfaction one has.

This was supported by McShane and Von Glinow (2010) who showed that job satisfaction is a very. It is an ethical issue that affects the reputation of the organization. Employees spend most of their time working in the organisation, and hence, they expect the company to provide a safe and enjoyable work environment so that organizational commitment will be formed. Daud, Holian and Zhang (2014) reveal job satisfaction and organisational commitment became an important attitude to organisational success.

Dissatisfied employees and low organisational commitment can lead to low morale and lack of ownership of the organization. Demİrtaş (2015) reveals that the importance of job satisfaction will affect staff health, work efficiency, work relationships and overall efficiency of the organisation. With regard to these aspects, job satisfaction has individual, organisational and social outcomes. Job satisfaction may result in negative attitudes such as low efficiency, work stoppage, absence, delay or theft, while on the other hand results include positive attitudes such as high efficiency, loyalty, punctuality, self-service, and commitment. Tabitha and Harjanti (2015) said that an increase in employee job satisfaction in the company is expected to encourage a high participation rate called organisational commitment. Employees who are satisfied with their work will enjoy a good relationship with their employers or with other colleagues. In addition, employees will be more enthusiastic in the work so that organisational goals can be achieved.

To sum up, job satisfaction of employees is very important for the organisation to meat organisational goals Employees who are satisfied with their work and think of their work as something fun will tend to perform well. Thus, having employees who are satisfied with their work will be easier for the organisation to achieve its objectives.

CONCLUSION

Based on the results of the study, it can be concluded that job satisfaction influences organisational commitment positively. This means that employee job satisfaction and organisational commitment has a significant/positive relationship. So, the more satisfied the employees are, the more committed they are to the organisation.

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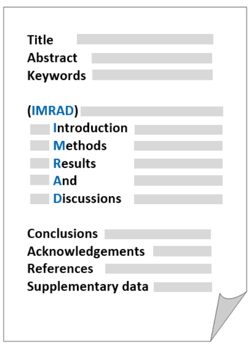

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